



Synergy Global Technology Inc

www.RackmountMart.com

Toll Free: 1-888-865-6888

Tel: 510-226-8368 Fax: 510-226-8968

Email: sales@RackmountMart.com

Single Rail LCD Console

User's Manual

Rev 1.0

PACKING LIST

The complete 15 / 17 / 19" LCD console package consist of:

- One 1U 19" rack mount console
- Two rails with front and rear bracket
- Two long brackets. (Needed for rack depth 828~1000mm)
- One 1.8M signal cable
- One power cord
- One user manual CD
- One quick installation guide
- Two key
- Six flat screws. (for rail mount to console body)
- Six screws. (for replace long bracket)

Check to make sure that the unit was not damaged in shipping. If you encounter a problem, contact your dealer.

Please read this manual thoroughly, and follow the installation and operation procedures carefully to prevent any damage to the product, and/or any of the devices that connect to it.

SAFETY INSTRUCTIONS

1. Please read these safety instructions carefully.
2. Please keep this User's Manual for later reference.
3. Please disconnect this equipment from AC outlet before cleaning. Don't use liquid or sprayed detergent for cleaning. Use moisture sheet or clothe for cleaning.
4. For pluggable equipment, the socked-outlet shall be installed near the equipment and shall be easily accessible.
5. Please keep this equipment from humidity.
6. Lay this equipment on a reliable surface when install. A drop or fall could cause injury.
7. Do not leave this equipment in an environment unconditioned, storage temperature above 60⁰ C, it may damage the equipment.
8. The opening on the enclosure is for air convection hence the equipment from overheating. **DO NOT COVER THE OPENING.**
9. Make sure the voltage of the power source connect the equipment to the power outlet.
10. Please keep the power cord such a way that people can not step on it. Do not place anything over power cord. The power cord must rate for the voltage and current marked on the product's electrical ratings label. The voltage and current rating of the cord should be greater than the voltage and the current rating marked on the product.
11. All cautions and warning on the equipment should be noted.
12. If the equipment is not in use for long time, disconnect the equipment from mains to avoid being damaged by transient over-voltage.
13. Never pour any liquid into ventilation openings; this could cause fire or electrical shock.
14. Never open the equipment. For safety reason, qualified service personnel should only open the equipment.
15. If one of the following situations arises, get the equipment checked by service personnel.
 - The Power Cord or plug is damaged.
 - Liquid has penetrated into the equipment.
 - The equipment has been exposed to moisture.
 - The equipment has not worked well or you can not get it work according to User's Manual.

- The equipment has dropped and damaged.
- If the equipment has obvious signs or breakage.

INDEX OF CONTENTS

PACKING LIST.....	I
SAFETY INSTRUCTIONS.....	II
INDEX OF CONTENTS.....	IV
1. GENERAL INFORMATION	1
1.1 Overview.....	1
1.2 Product Specification	2
1.2.1 15" LCD Console Specification	2
1.2.2 17" LCD Console Specification	6
1.2.3 19" LCD Console Specification	10
2. PANEL CONTROLS AND OSD FUNCTIONS	14
2.1 Auto Tune	14
2.2 Input Source	15
2.3 Brightness.....	15
2.4 Contrast	16
2.5 Color	16
2.6 Position	17
2.7 Language.....	18
2.8 Recall.....	19
2.9 Exit.....	19
2.10 Power Indicator.....	19
3. INSTALLATION	20
3.1 Install Console into Cabinet	20
3.1.1 Notes	20
3.1.2 Hardware Kits Contents	20
3.1.3 Installation Step	21
3.1.4 Replace longer bracket Step (For rack depth 828~1000mm) ...	23
3.1.5 Unload Step	23
3.2 Installing the Video Card and Video Driver.....	25
3.2.1 Configuring the Display Settings	25
3.2.2 Connecting the Console	26
3.3 Turning on the Console	26
3.4 Testing the Console.....	26
4. KVM SWITCH.....	28
4.1 Introduction	28
4.2 Feature	28

4.3	Technical Specifications	29
4.4	System Requirements.....	30
4.5	Cable Diagrams	30
4.6	Product Details	31
4.7	Hardware Installation.....	31
4.8	Usage	32
4.9	Daisy Chain Connection Diagram.....	35
4.10	Hot Plug	36
4.11	On Screen Display Operation	37
4.12	Troubleshooting	41

1. GENERAL INFORMATION

1.1 Overview

The KVM console is an ideal solution for network administration with multiple servers / platforms. Their 15-inch and 17-inch 19-inch large size TFT LCD color display and ultra-low-profile compact industrial keyboard / touchpad provide the user-friendliest and most reliable environment for network administrators. All these functions are integrated in a 19-inch 1U space with rugged construction design to achieve ultra space saving and high reliability for high quality industrial network applications.

The KVM console provide superior picture quality and state-of-the-art features mounted in an industrial grade, rack mount console. The console forms a rugged enclosure that protects the monitor from industrial hazards and permits easy access to monitor controls.

The KVM console monitors provide flicker-free color images at optimal resolutions. The monitors' 0.264mm pixel pitch ensures crisp images with clear definition, even at high resolutions. The KVM console monitors are intelligent, microprocessor-based, and have an ergonomically designed display.

The KVM console monitors employ the latest in active matrix thin film transistor (TFT) technology, providing crisp screen images and wide viewing angles.

Unlike CRT monitors, LCD monitors are inherently immune to the magnetic fields commonly found on the plant floor or communications centers. LCDs are also typically brighter than conventional CRT technology, making them ideal for the high ambient lighting conditions found in many of today's factory environments. On-screen menus allow for display adjustments. In addition, the monitors' Plug-n-Play+ features support Windows 95/98,NT and XP, while a universal power supply ensures global applicability.

The KVM console monitors are compatible with most analog RGB (red, green, blue) display standards, including PS/2, optional for Sun Micro System, Apple Macintosh Centris, Quadra, and Macintosh II family signals. The LCD monitor is capable of displaying crisp and vibrant color graphics with VGA, S2GA, XGA (non-interlaced), and most Macintosh compatible color video cards.

1.2 Product Specification

1.2.1 15" LCD Console Specification

Model name	15" LCD console
Number of ports	1
Dimension	482 x 447.5 x 44 mm / 19.0 x 17.6 x 1.7 inches
Net Weight	11.0 Kg / 24.3 lbs
Display Size	15 inches
Panel Type	Active Matrix TFT LCD
Resolution Capabilities	Maximum Resolution up to 1024 x 768 (XGA)
Pixel Pitch	Supports 0.297 mm x 0.297 mm
Viewing Angle (CR>10)	Right-Left view 130°(Typ) Up-Down View 100°(Typ)
Contrast Ratio	400:1
Brightness	White 250 cd/m2 (Center 1 point Typ)
Back Light	Dual Lamps for Back Light
Supported Colors	16M Colors (6-bit with FRC)
Response Time	Rising Time 5 ms, Decay Time 11 ms
Operating System	Dos, Windows (3.1, 9x, 2000, NT4, ME, XP, 2003 Server) Linux, Novell 3.12-6, HP UX, SUN
Multi Platform	Support PS/2, SUN and USB
System Cables	VGA + PS/2 x 2 cable
Keyboard Mouse	106 key PS/2 keyboard with touch pad
Sync	45 ~ 80 KHz
Power Source	100 ~ 240 VAC input
Power Consumption	16W, 10.41W for Panel
Temperature	Operate 0 ~ 50°C / 32 ~ 122°F Storage -20 ~ 60°C / -4 ~ 140°F
Humidity	10% ~ 90% RH
Chassis Construction	Heavy duty steel materials
Keyboard Language	USA, UK, German, French, Spanish, Italian, Portuguese, Dutch, Swiss, Belgium, Swedish, Norwegian, Danish, Japan, Taiwan, Russian, Hebrew
Certification	CE / FCC, UL / CUL / C-Tick

Table 1-1. 15" LCD Console Specification

Model name	15" LCD console with 8 ports KVM switch
Number of ports	8
Dimension	592 x 447.5 x 44 mm / 23.3 x 17.6 x 1.7 inches
Net Weight	12.0 Kg / 26.5 lbs
Display Size	15 inches
Panel Type	Active Matrix TFT LCD
Resolution Capabilities	Maximum Resolution up to 1024 x 768 (XGA)
Pixel Pitch	Supports 0.297 mm x 0.297 mm
Viewing Angle (CR>10)	Right-Left view 130°(Typ) Up-Down View 100°(Typ)
Contrast Ratio	400:1
Brightness	White 250 cd/m2 (Center 1 point Typ)
Back Light	Dual Lamps for Back Light
Supported Colors	16M Colors (6-bit with FRC)
Response Time	Rising Time 5 ms, Decay Time 11 ms
Operating System	Dos, Windows (3.1, 9x, 2000, NT4, ME, XP, 2003 Server) Linux, Novell 3.12-6, HP UX, SUN
Multi Platform	Support PS/2, SUN and USB
System Cables	VGA + PS/2 x 2 cable
Keyboard Mouse	106 key PS/2 keyboard with touch pad
Sync	45 ~ 80 KHz
Power Source	100 ~ 240 VAC input
Power Consumption	16W, 10.41W for Panel
Temperature	Operate 0 ~ 50°C / 32 ~ 122°F Storage -20 ~ 60°C / -4 ~ 140°F
Humidity	10% ~ 90% RH
Chassis Construction	Heavy duty steel materials
Keyboard Language	USA, UK, German, French, Spanish, Italian, Portuguese, Dutch, Swiss, Belgium, Swedish, Norwegian, Danish, Japan, Taiwan, Russian, Hebrew
Certification	CE / FCC, UL / CUL / C-Tick

Table 1-2. 15" LCD Console with 8 ports KVM Switch Specification

Model name	15" LCD console with 16 ports KVM switch
Number of ports	16
Dimension	592 x 447.5 x 44 mm / 23.3 x 17.6 x 1.7 inches
Net Weight	12.5 Kg / 27.6 lbs
Display Size	15 inches
Panel Type	Active Matrix TFT LCD
Resolution Capabilities	Maximum Resolution up to 1024 x 768 (XGA)
Pixel Pitch	Supports 0.297 mm x 0.297 mm
Viewing Angle (CR>10)	Right-Left view 130°(Typ) Up-Down View 100°(Typ)
Contrast Ratio	400:1
Brightness	White 250 cd/m2 (Center 1 point Typ)
Back Light	Dual Lamps for Back Light
Supported Colors	16M Colors (6-bit with FRC)
Response Time	Rising Time 5 ms, Decay Time 11 ms
Operating System	Dos, Windows (3.1, 9x, 2000, NT4, ME, XP, 2003 Server) Linux, Novell 3.12-6, HP UX, SUN
Multi Platform	Support PS/2, SUN and USB
System Cables	VGA + PS/2 x 2 cable
Keyboard Mouse	106 key PS/2 keyboard with touch pad
Sync	45 ~ 80 KHz
Power Source	100 ~ 240 VAC input
Power Consumption	16W, 10.41W for Panel
Temperature	Operate 0 ~ 50°C / 32 ~ 122°F Storage -20 ~ 60°C / -4 ~ 140°F
Humidity	10% ~ 90% RH
Chassis Construction	Heavy duty steel materials
Keyboard Language	USA, UK, German, French, Spanish, Italian, Portuguese, Dutch, Swiss, Belgium, Swedish, Norwegian, Danish, Japan, Taiwan, Russian, Hebrew
Certification	CE / FCC, UL / CUL / C-Tick

Table 1-3. 15" LCD Console with 16 ports KVM Switch Specification

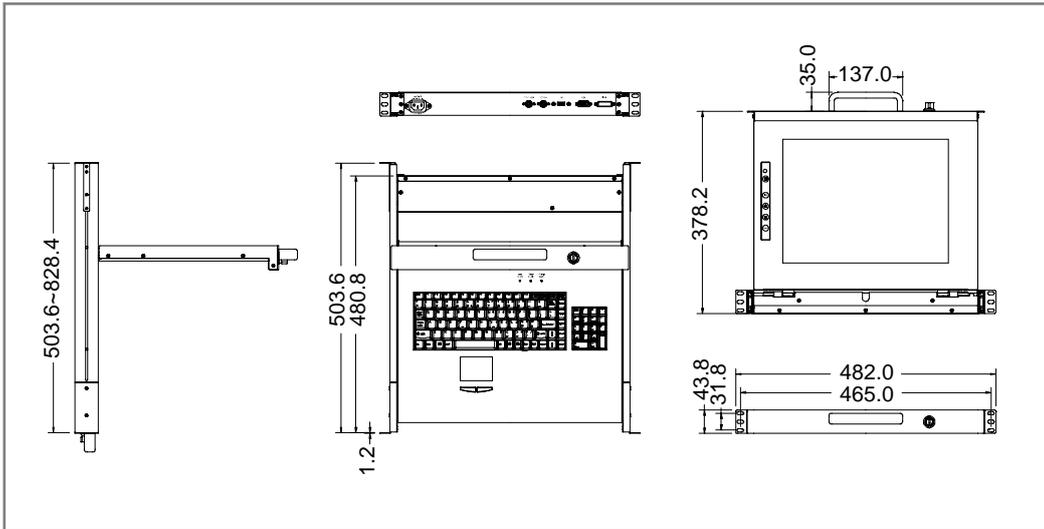


Figure 1-1. 15" LCD Console Dimension

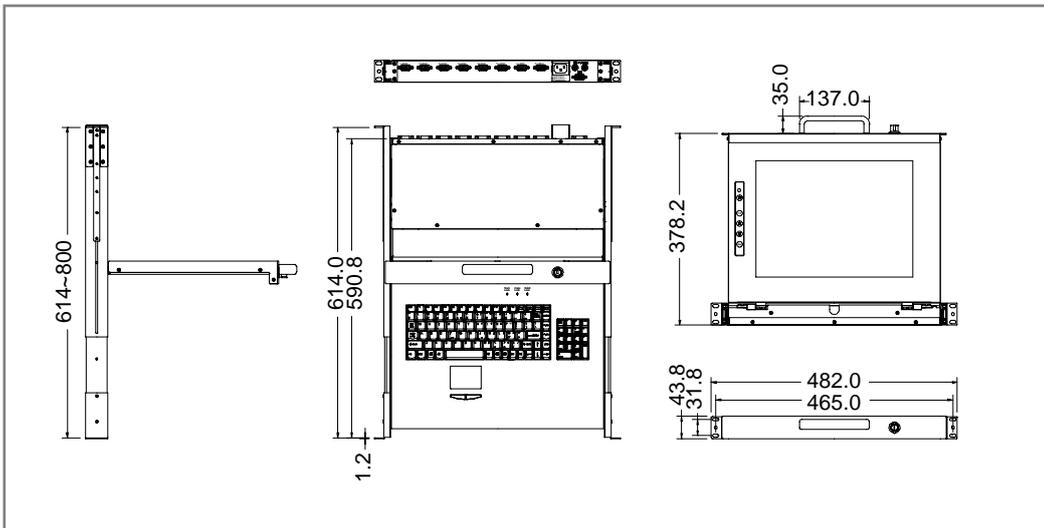


Figure 1-2. 15" LCD Console with 8 ports KVM Switch Dimension

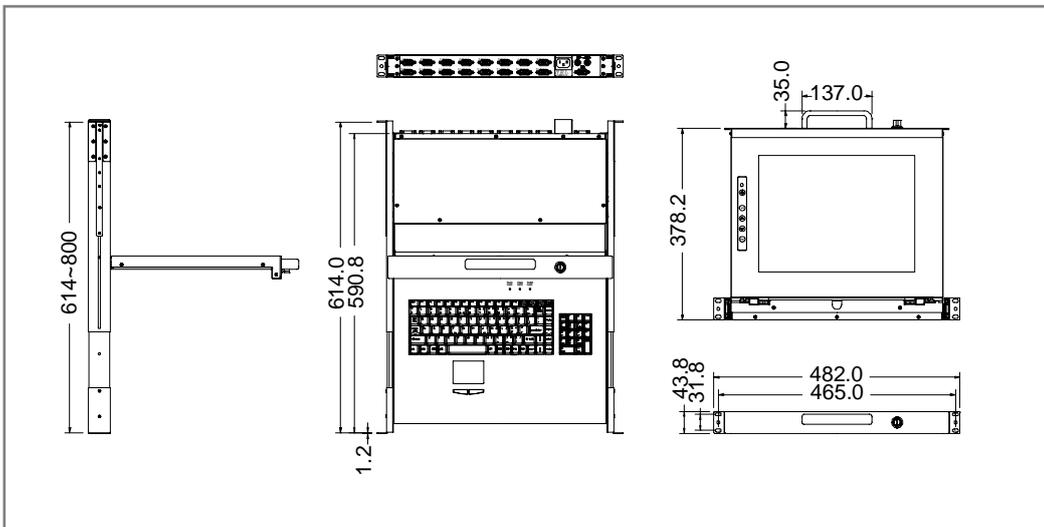


Figure 1-3. 15" LCD Console with 16 ports KVM Switch Dimension

1.2.2 17" LCD Console Specification

Model name	17" LCD console
Number of ports	1
Dimension	482 x 447.5 x 44 mm / 19.0 x 17.6 x 1.7 inches
Net Weight	12.0 Kg / 26.5 lbs
Display Size	17 inches
Panel Type	Active Matrix TFT LCD
Resolution Capabilities	Maximum Resolution up to 1280 x 1024 (SXGA)
Pixel Pitch	Supports 0.264 mm x 0.264 mm
Viewing Angle (CR>10)	Right-Left view 170°(Typ) Up-Down View 160°(Typ)
Contrast Ratio	1000:1
Brightness	White 250 cd/m2 (Center 1 point Typ)
Back Light	Dual Lamps for Back Light
Supported Colors	16.7M Colors (8-bit with FRC)
Response Time	Rising Time 1.2 ms, Decay Time 3.8 ms
Operating System	Dos, Windows (3.1, 9x, 2000, NT4, ME, XP, 2003 Server) Linux, Novell 3.12-6, HP UX, SUN
Multi Platform	Support PS/2, SUN and USB
System Cables	VGA + PS/2 x 2 cable
Keyboard Mouse	106 key PS/2 keyboard with touch pad
Sync	45 ~ 80 KHz
Power Source	100 ~ 240 VAC input
Power Consumption	13.35W for Panel
Temperature	Operate 0 ~ 50°C / 32 ~ 122°F Storage -20 ~ 60°C / -4 ~ 140°F
Humidity	10% ~ 90% RH
Chassis Construction	Heavy duty steel materials
Keyboard Language	USA, UK, German, French, Spanish, Italian, Portuguese, Dutch, Swiss, Belgium, Swedish, Norwegian, Danish, Japan, Taiwan, Russian, Hebrew
Certification	CE / FCC, UL / CUL / C-Tick

Table 1-4. 17" LCD Console Specification

Model name	17" LCD console with 8 ports KVM switch
Number of ports	8
Dimension	592 x 447.5 x 44 mm / 23.3 x 17.6 x 1.7 inches
Net Weight	13.0 Kg / 28.7 lbs
Display Size	17 inches
Panel Type	Active Matrix TFT LCD
Resolution Capabilities	Maximum Resolution up to 1280 x 1024 (SXGA)
Pixel Pitch	Supports 0.264 mm x 0.264 mm
Viewing Angle (CR>10)	Right-Left view 170°(Typ) Up-Down View 160°(Typ)
Contrast Ratio	1000:1
Brightness	White 250 cd/m2 (Center 1 point Typ)
Back Light	Dual Lamps for Back Light
Supported Colors	16.7M Colors (8-bit with FRC)
Response Time	Rising Time 1.2 ms, Decay Time 3.8 ms
Operating System	Dos, Windows (3.1, 9x, 2000, NT4, ME, XP, 2003 Server) Linux, Novell 3.12-6, HP UX, SUN
Multi Platform	Support PS/2, SUN and USB
System Cables	VGA + PS/2 x 2 cable
Keyboard Mouse	106 key PS/2 keyboard with touch pad
Sync	45 ~ 80 KHz
Power Source	100 ~ 240 VAC input
Power Consumption	13.35W for Panel
Temperature	Operate 0 ~ 50°C / 32 ~ 122°F Storage -20 ~ 60°C / -4 ~ 140°F
Humidity	10% ~ 90% RH
Chassis Construction	Heavy duty steel materials
Keyboard Language	USA, UK, German, French, Spanish, Italian, Portuguese, Dutch, Swiss, Belgium, Swedish, Norwegian, Danish, Japan, Taiwan, Russian, Hebrew
Certification	CE / FCC, UL / CUL / C-Tick

Table 1-5. 17" LCD Console with 8 ports KVM Switch Specification

Model name	17" LCD console with 16 ports KVM switch
Number of ports	16
Dimension	592 x 447.5 x 44 mm / 23.3 x 17.6 x 1.7 inches
Net Weight	13.5 Kg / 29.8 lbs
Display Size	17 inches
Panel Type	Active Matrix TFT LCD
Resolution Capabilities	Maximum Resolution up to 1280 x 1024 (SXGA)
Pixel Pitch	Supports 0.264 mm x 0.264 mm
Viewing Angle (CR>10)	Right-Left view 170°(Typ) Up-Down View 160°(Typ)
Contrast Ratio	1000:1
Brightness	White 250 cd/m2 (Center 1 point Typ)
Back Light	Dual Lamps for Back Light
Supported Colors	16.7M Colors (8-bit with FRC)
Response Time	Rising Time 1.2 ms, Decay Time 3.8 ms
Operating System	Dos, Windows (3.1, 9x, 2000, NT4, ME, XP, 2003 Server) Linux, Novell 3.12-6, HP UX, SUN
Multi Platform	Support PS/2, SUN and USB
System Cables	VGA + PS/2 x 2 cable
Keyboard Mouse	106 key PS/2 keyboard with touch pad
Sync	45 ~ 80 KHz
Power Source	100 ~ 240 VAC input
Power Consumption	13.35W for Panel
Temperature	Operate 0 ~ 50°C / 32 ~ 122°F Storage -20 ~ 60°C / -4 ~ 140°F
Humidity	10% ~ 90% RH
Chassis Construction	Heavy duty steel materials
Keyboard Language	USA, UK, German, French, Spanish, Italian, Portuguese, Dutch, Swiss, Belgium, Swedish, Norwegian, Danish, Japan, Taiwan, Russian, Hebrew
Certification	CE / FCC, UL / CUL / C-Tick

Table 1-6. 17" LCD Console with 16 ports KVM Switch Specification

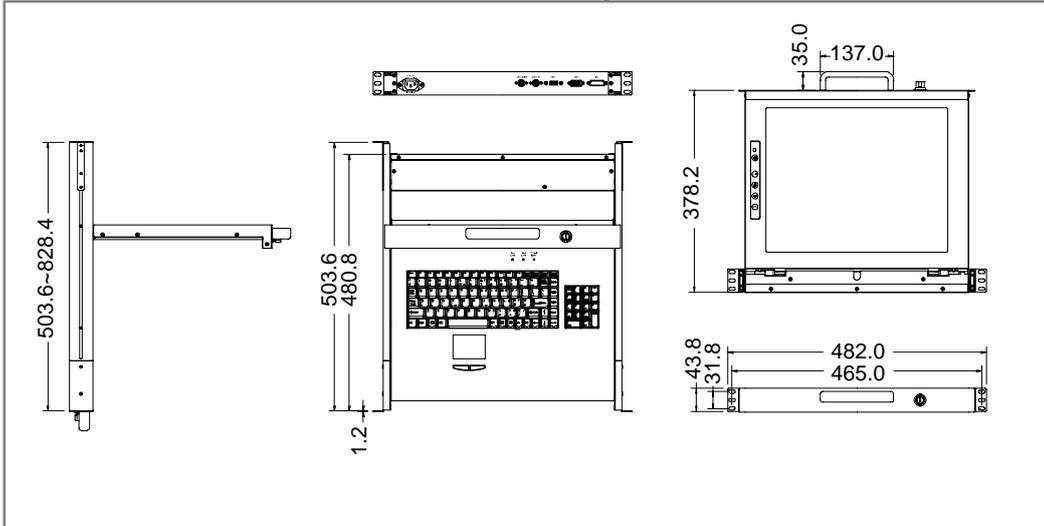


Figure 1-4. 17" LCD Console Dimension

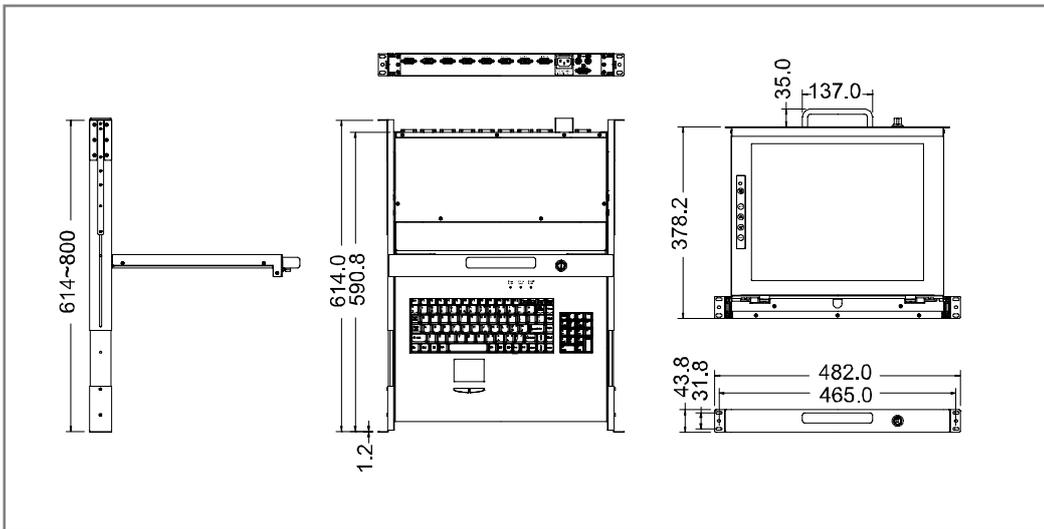


Figure 1-5. 17" LCD Console with 8 ports KVM Switch Dimension

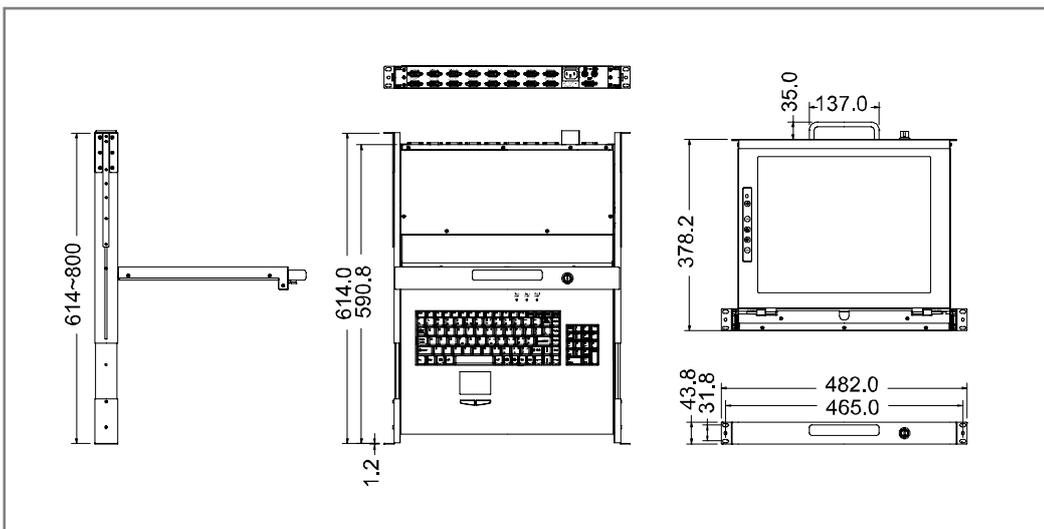


Figure 1-6. 17" LCD Console with 16 ports KVM Switch Dimension

1.2.3 19" LCD Console Specification

Model name	19" LCD console
Number of ports	1
Dimension	532 x 447.5 x 44 mm / 20.9 x 17.6 x 1.7 inches
Net Weight	12.5 Kg / 27.6 lbs
Display Size	19 inches
Panel Type	Active Matrix TFT LCD
Resolution Capabilities	Maximum Resolution up to 1280 x 1024 (SXGA)
Pixel Pitch	Supports 0.098 mm x 0.294 mm
Viewing Angle (CR>10)	Right-Left view 170°(Typ) Up-Down View 160°(Typ)
Contrast Ratio	1000:1
Brightness	White 250 cd/m2 (Center 1 point Typ)
Back Light	Dual Lamps for Back Light
Supported Colors	16.7M Colors (8-bit with FRC)
Response Time	Rising Time 1.3 ms, Decay Time 3.7 ms
Operating System	Dos, Windows (3.1, 9x, 2000, NT4, ME, XP, 2003 Server) Linux, Novell 3.12-6, HP UX, SUN
Multi Platform	Support PS/2, SUN and USB
System Cables	VGA + PS/2 x 2 cable
Keyboard Mouse	106 key PS/2 keyboard with touch pad
Sync	45 ~ 80 KHz
Power Source	100 ~ 240 VAC input
Power Consumption	13.6W for Panel
Temperature	Operate 0 ~ 50°C / 32 ~ 122°F Storage -20 ~ 60°C / -4 ~ 140°F
Humidity	10% ~ 90% RH
Chassis Construction	Heavy duty steel materials
Keyboard Language	USA, UK, German, French, Spanish, Italian, Portuguese, Dutch, Swiss, Belgium, Swedish, Norwegian, Danish, Japan, Taiwan, Russian, Hebrew
Certification	CE / FCC, UL / CUL / C-Tick

Table 1-7. 19" LCD Console Specification

Model name	19" LCD console with 8 ports KVM switch
Number of ports	8
Dimension	642 x 447.5 x 44 mm / 22.4 x 17.6 x 1.7 inches
Net Weight	14.0 Kg / 30.9 lbs
Display Size	19 inches
Panel Type	Active Matrix TFT LCD
Resolution Capabilities	Maximum Resolution up to 1280 x 1024 (SXGA)
Pixel Pitch	Supports 0.098 mm x 0.294 mm
Viewing Angle (CR>10)	Right-Left view 170°(Typ) Up-Down View 160°(Typ)
Contrast Ratio	1000:1
Brightness	White 250 cd/m2 (Center 1 point Typ)
Back Light	Dual Lamps for Back Light
Supported Colors	16.7M Colors (8-bit with FRC)
Response Time	Rising Time 1.3 ms, Decay Time 3.7 ms
Operating System	Dos, Windows (3.1, 9x, 2000, NT4, ME, XP, 2003 Server) Linux, Novell 3.12-6, HP UX, SUN
Multi Platform	Support PS/2, SUN and USB
System Cables	VGA + PS/2 x 2 cable
Keyboard Mouse	106 key PS/2 keyboard with touch pad
Sync	45 ~ 80 KHz
Power Source	100 ~ 240 VAC input
Power Consumption	13.6W for Panel
Temperature	Operate 0 ~ 50°C / 32 ~ 122°F Storage -20 ~ 60°C / -4 ~ 140°F
Humidity	10% ~ 90% RH
Chassis Construction	Heavy duty steel materials
Keyboard Language	USA, UK, German, French, Spanish, Italian, Portuguese, Dutch, Swiss, Belgium, Swedish, Norwegian, Danish, Japan, Taiwan, Russian, Hebrew
Certification	CE / FCC, UL / CUL / C-Tick

Table 1-8. 19" LCD Console with 8 ports KVM Switch Specification

Model name	19" LCD console with 16 ports KVM switch
Number of ports	16
Dimension	642 x 447.5 x 44 mm / 22.4 x 17.6 x 1.7 inches
Net Weight	14.5 Kg / 32.0 lbs
Display Size	19 inches
Panel Type	Active Matrix TFT LCD
Resolution Capabilities	Maximum Resolution up to 1280 x 1024 (SXGA)
Pixel Pitch	Supports 0.098 mm x 0.294 mm
Viewing Angle (CR>10)	Right-Left view 170°(Typ) Up-Down View 160°(Typ)
Contrast Ratio	1000:1
Brightness	White 250 cd/m2 (Center 1 point Typ)
Back Light	Dual Lamps for Back Light
Supported Colors	16.7M Colors (8-bit with FRC)
Response Time	Rising Time 1.3 ms, Decay Time 3.7 ms
Operating System	Dos, Windows (3.1, 9x, 2000, NT4, ME, XP, 2003 Server) Linux, Novell 3.12-6, HP UX, SUN
Multi Platform	Support PS/2, SUN and USB
System Cables	VGA + PS/2 x 2 cable
Keyboard Mouse	106 key PS/2 keyboard with touch pad
Sync	45 ~ 80 KHz
Power Source	100 ~ 240 VAC input
Power Consumption	13.6W for Panel
Temperature	Operate 0 ~ 50°C / 32 ~ 122°F Storage -20 ~ 60°C / -4 ~ 140°F
Humidity	10% ~ 90% RH
Chassis Construction	Heavy duty steel materials
Keyboard Language	USA, UK, German, French, Spanish, Italian, Portuguese, Dutch, Swiss, Belgium, Swedish, Norwegian, Danish, Japan, Taiwan, Russian, Hebrew
Certification	CE / FCC, UL / CUL / C-Tick

Table 1-9. 19" LCD Console with 16 ports KVM Switch Specification

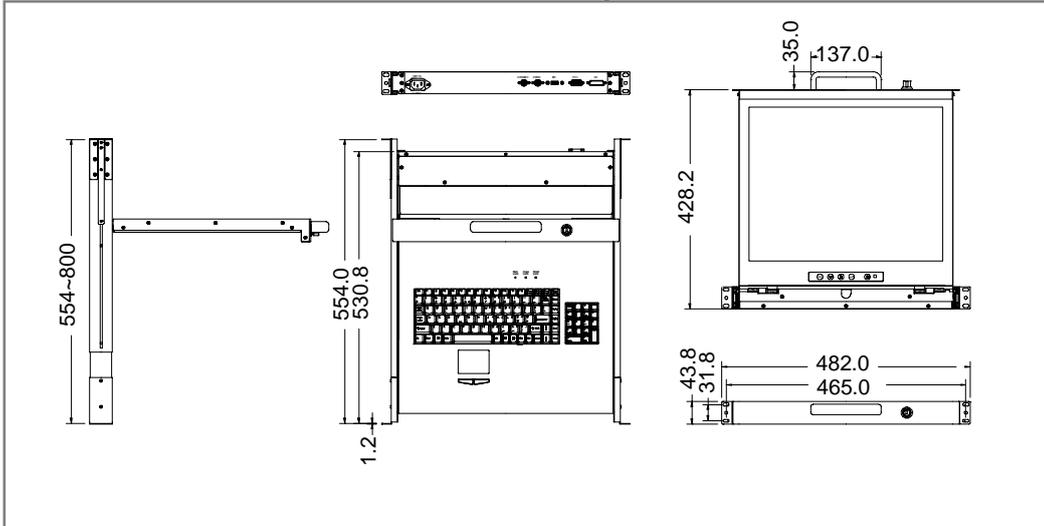


Figure 1-7. 19" LCD Console Dimension

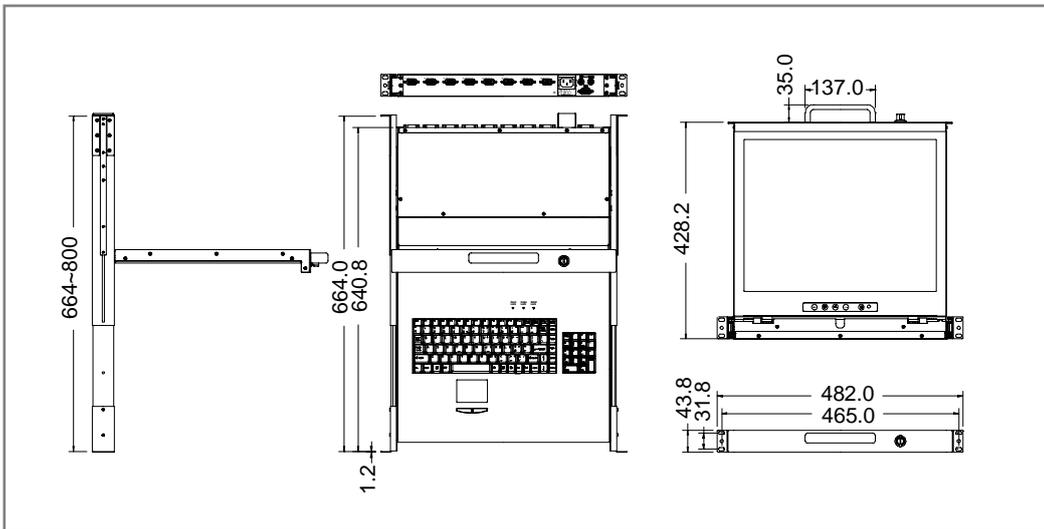


Figure 1-8. 19" LCD Console with 8 ports KVM Switch Dimension

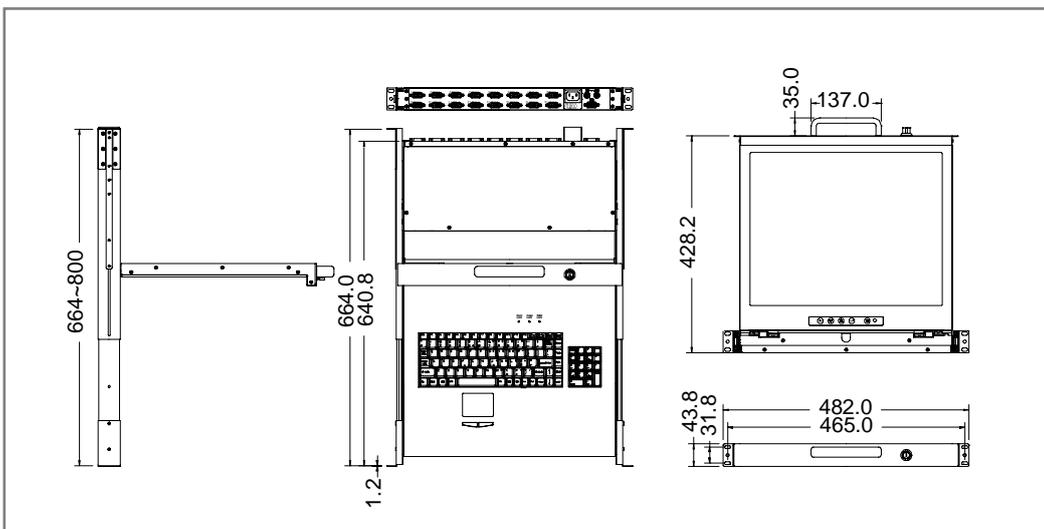


Figure 1-9. 19" LCD Console with 16 ports KVM Switch Dimension

2. PANEL CONTROLS AND OSD FUNCTIONS

Controls	Description
	Soft power on/off button. Adjacent LED is lit when on.
Auto	Auto-synchronize and scale down display to any valid factory preset timings.
	Press to scroll the function you want to adjust.
	Press to scroll the function you want to adjust.
Menu	To access the main menu. This button also acts as the "Enter" button.

Table 2-1. Panel Controls

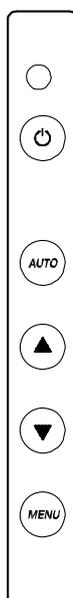


Figure 2-1. 15 / 17" LCD Console OSD Control Bar

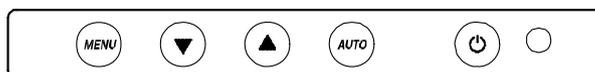


Figure 2-2. 19" LCD Console OSD Control Bar

2.1 Auto Tune

Press the "auto tune" button. The panel will adjust the display size automatically and also tune the panel to its best condition.

2.2 Input Source

1. Press the “menu” button.
2. Use the “Down” and “Up” button to scroll.

Auto tune.

Input Source

Brightness

Contrast

Color

Position

Language

Recall

Exit

3. Press the “menu” button to enter, and you will see:

VGA / DVI

4. Use the “Down” and “Up” button to select the input source of signal.
5. Press the “menu” button to enter

2.3 Brightness

1. Press the “menu” button.
2. Use the “Down” and “Up” button to scroll.

Auto tune.

Input Source

Brightness

Contrast

Color

Position

Language

Recall

Exit

3. Press the “menu” button to enter.
4. Use the “Down” and “Up” button to adjust the brightness of the display.
5. Press the “menu” button to enter.

2.4 Contrast

1. Press the “menu” button.
2. Use the “Down” and “Up” button to scroll.

Auto tune.
Input Source
Brightness
Contrast
Color
Position
Language
Recall
Exit

1. Press the “menu” button to enter.
2. Use the “Down” and “Up” button to adjust the contrast of the display.
3. Press the “menu” button to enter.

2.5 Color

1. Press the “menu” button.
2. Use the “Down” and “Up” button to scroll.

Auto tune.
Input Source
Brightness
Contrast
Color
Position
Language
Recall
Exit

3. Press the “menu” button to enter. And you will see:

Icon	Description
9300°K	To set CIE coordinates at 9300°K color
7500°K	To set CIE coordinates at 7500°K color
6500°K	To set CIE coordinates at 6500°K color
User	To set user defined CIE
Auto color	To auto adjust color
Return	To exit and return to the previous page

Table 2-2. Icon Description

4. Use the “Down” and “Up” button to adjust the color of the display.

5. Press “menu” to enter.

2.6 Position

1. Press the “menu” button.

2. Use the “Down” and “Up” button to scroll.

Auto tune.

Input Source

Brightness

Contrast

Color

Position

Language

Recall

Exit

3. Press the “menu” button to enter. And you will see:

Icon	Description
Image Pos	To adjust the position of the image.
OSD Pos	To adjust the position of the OSD.
Return	To exit and return to the previous page

Table 2-3. Icon Description

4. Use the “Down” and “Up” button to scroll.
5. Press the “menu” button to enter.

2.7 Language

1. Press the “menu” button.
2. Use the “Down” and “Up” button to scroll.
 - Auto tune.
 - Input Source
 - Brightness
 - Contrast
 - Color
 - Position
 - Language**
 - Recall
 - Exit
3. Press the “menu” button to enter. And you will see:
 - English**
 - German
 - French
 - Italian
 - Spanish
4. Use the “Down” and “Up” button to scroll.
5. Press the “menu” button to enter.

2.8 Recall

1. Press the “menu” button.
2. Use the “Down” and “Up” button to scroll.
 - Auto tune.
 - Input Source
 - Brightness
 - Contrast
 - Color
 - Position
 - Language
 - Recall**
 - Exit
3. Press the “menu” button to enter, and you will see:
 - Yes/ No**
4. Select “Yes” button then ‘Menu’ button to recall the factory setting.
Select “No “ to return to the previous page.

2.9 Exit

Press the “exit” button to quit OSD menu.

2.10 Power Indicator

- ◆ GREEN ON
- ◆ RED STANDBY
- ◆ RED SUSPEND
- ◆ RED OFF



.....
OSD – On Screen Display
.....

3. INSTALLATION

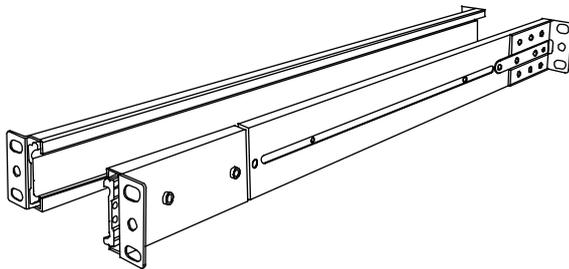
3.1 Install Console into Cabinet

3.1.1 Notes

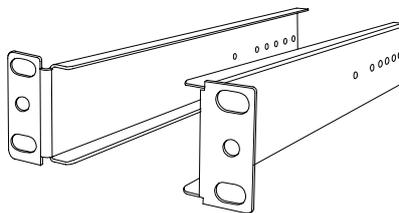
1. Please check all peripherals according the list before installation. To make sure that the whole unit was not damaged and lost during shipping process. If you encounter any problem, please contact your dealer.
2. Before installation, make sure all peripherals and computer have been turned off.
3. The standard brackets are for 504~1000mm (distance means front bracket to rear bracket) cabinet, contact your dealer if you need more longer rear brackets.
4. Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit.

3.1.2 Hardware Kits Contents

1. Rail with front and rear bracket x 2. (Please identify the brackets. Right and left sides are different. For rack depth 504 ~ 828 mm)



2. Long bracket x 2. (Needed for rack depth 828 ~ 1000mm)



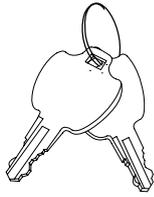
3. Flat screw x 6 (for rail mount to console body)



4. Screw x 6

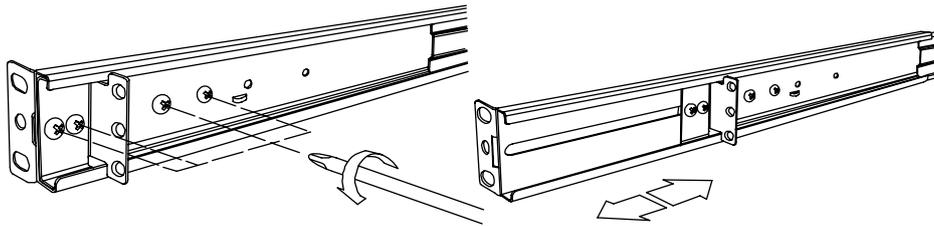


5. Key x 2

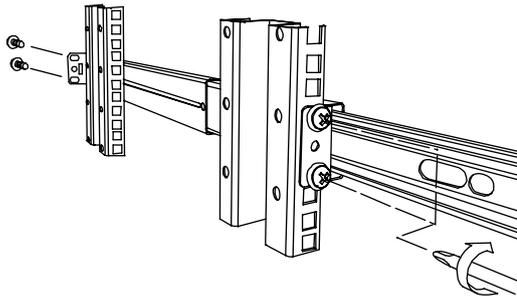


3.1.3 Installation Step

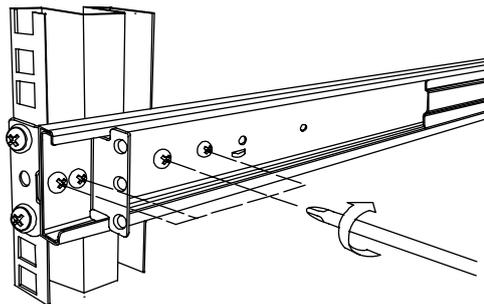
1. Loose (Not release) four rear screws then adjust rear bracket to fit your cabinet.



2. Install front and rear bracket on cabinet.

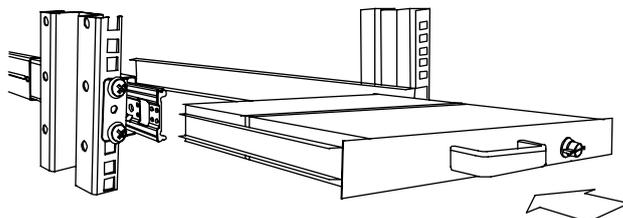


3. Tight-up four rear screws.



4. Repeat step 1~3 for the other side.

5. Push console into left and right rails. (Be careful when take out console.)



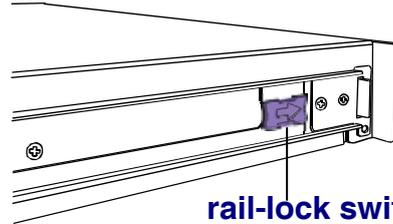
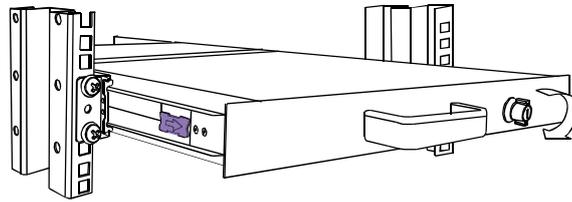
6. Unlock and pull rail-lock switch (left and right at the same time) then push console to the end.



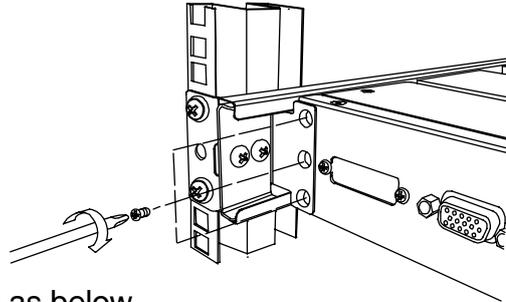
lock



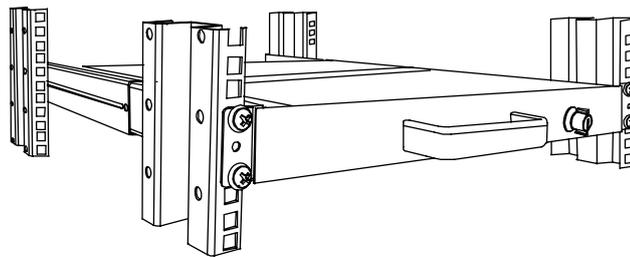
unlock



7. Install three screws in rear of the console. (Both sides)

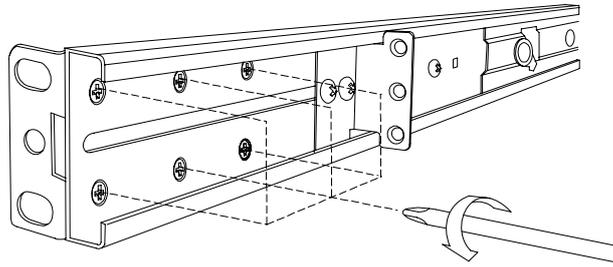


8. Finish installation as below.

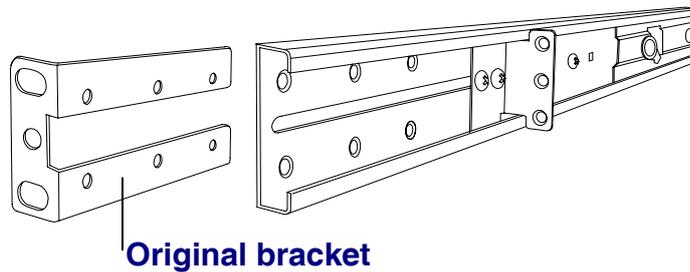


3.1.4 Replace longer bracket Step (For rack depth 828~1000mm)

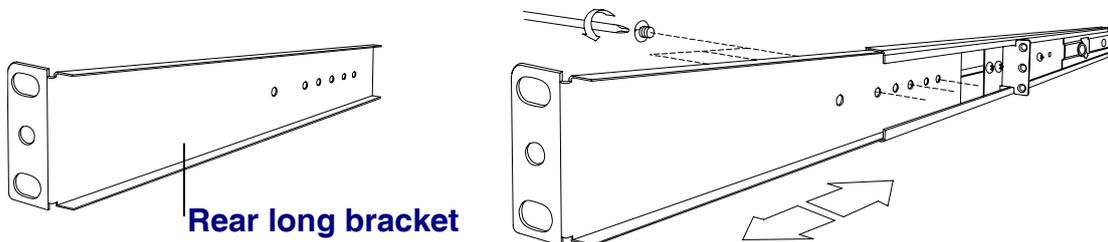
1. Release six screws.



2. Take rear bracket out.



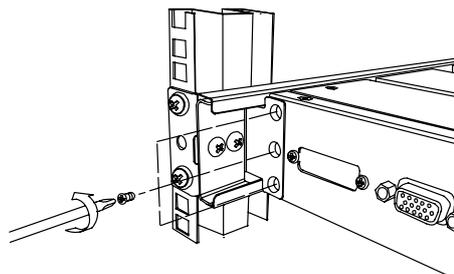
- 2 Input rear long bracket to rear of the rail then adjust rear bracket to fit your cabinet. Tight-up 2~3 screws upon the length you need. One is forbidden.



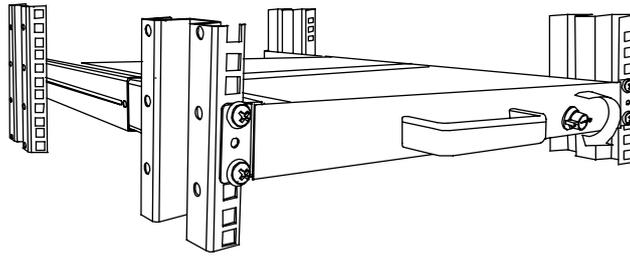
4. Repeat step 1~3 for the other side.
5. Repeat 3.1.3 step to install console.

3.1.5 Unload Step

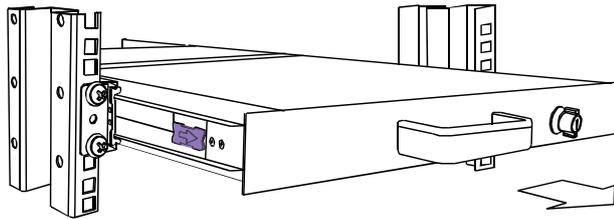
1. Make sure the console is lock.
2. Release three screws in rear of the console. (Both sides)



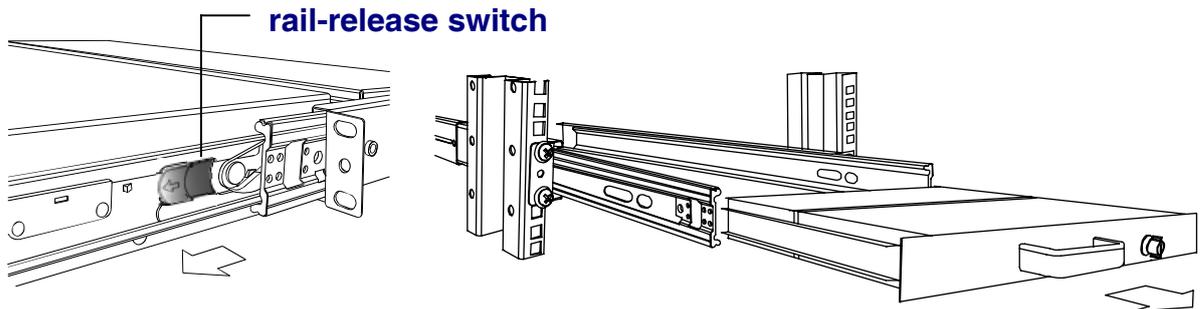
3. Unlock.



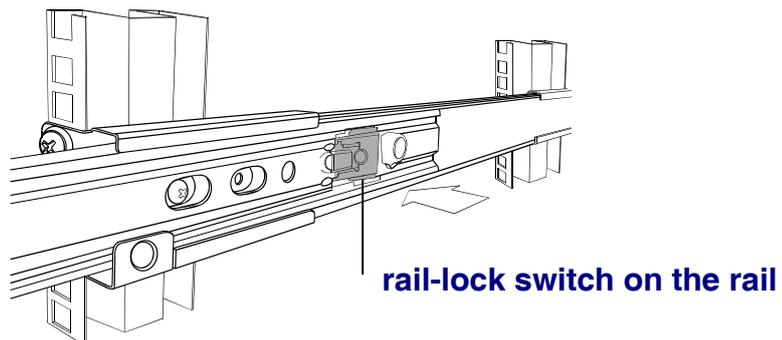
4. Pull console out until console lock.



5. Pull rail-release switch and pull console out.(Both sides. Be careful when pull out console.)



6. Push rail-lock switch on the rail and push rail back.(Both sides)



3.2 Installing the Video Card and Video Driver

Before connecting the LCD console, make sure your computer has a video card already installed for the monitor. After you connect the console, install the video software driver. The video driver is supplied by the video card manufacturer and may be found on the CD-ROM that came with your computer. If you need information on installing a video card or video driver, refer to the manual that came with your video card.

3.2.1 Configuring the Display Settings

After connecting the console and turning on your computer, you may need to configure one or more of the following display settings:

- Display mode (also called desktop area or video resolution)
- Refresh rate (also called vertical scan rate or vertical sync)
- Color depth (also called color palette or number of colors)

Each video card has several controls that let you adjust the display settings. However, the software and driver for each video card is unique. In most cases, you adjust these settings by using a program or utility provided by the manufacturer of the video card. Most video cards use the Windows Display Properties control panel to configure the display. To open the Windows Display Properties, click the right mouse button in a blank area of the Windows desktop and then select **Properties**. The Settings tab usually lets you change the Color Palette and the Desktop Area (*x by y* pixel resolution).

Some video cards integrate additional features into the Windows Display Properties control panel to give you an exceptional setup that is flexible and easy to use. For example, the control panel may include an Advanced Properties button, an Adjustment tab, or a Refresh tab for changing other settings. Other video cards have a separate utility for setting display properties.

Whenever you change the resolution, color, or refresh rate, the image size, position, or shape may change. This behavior is normal. You can readjust the image using the monitor on-screen controls. For more information on the monitor on-screen controls, refer to Chapter 2. For more information on configuring the display settings, refer to the manual that came with your video card.

3.2.2 Connecting the Console

To connect an LCD console to a computer, perform the following steps



Figure 3-1. The rear view of LCD console

1. Turn off your computer. You should always turn off your computer before connecting or disconnecting a device.
2. Connect the video (VGA) connector of the KVM cable to the video card connector on the rear panel of your computer.
3. Identify and connect the PS/2 mouse and PS/2 keyboard connector to the correct PS/2 ports on the rear panel of your computer.
4. Connect the AC power cord to the power inlet on the console and then to a power outlet.

3.3 Turning on the Console

Make sure all cables and the power cord are connected properly. Be sure to tighten all connector screws. Using two hands, grasp the rear of the console, lift the tab and pull the panel up and forward. This will disengage the momentary on/off switch and the unit should power on. The LED on the left or under of the monitor panel should turn from orange to green, verifying that the unit is operational.

3.4 Testing the Console

To test that the console is working properly, perform the following steps:

1. Power up the console, and then turn on your computer.
2. Make sure the video image is centered within the screen area. Use the OSD controls to adjust the image (see note below) or press the Auto button on the right hand side of the monitor.



.....
If the unit does not power up when the panel is pulled up, try pushing the soft power on/off button on the left or under side of the monitor panel to power up the unit.
.....



You can adjust the horizontal and vertical position, contrast, and brightness to better suit your video card and your personal preference. Refer to Chapter 2 for more information on using the on-screen menu to adjust the video display

Before you begin, make sure that powers to all the devices you will be connecting up have been turned off. To prevent damage to your installation due to ground potential difference, make sure that all the devices on the installation are properly grounded. Consult your direct vendor for any technical issues if necessary.

4. KVM SWITCH

4.1 Introduction

Controlling multiple computers from One Keyboard, Mouse and VGA Monitor. Rack Mount console is loaded with features such as 19" Rack Mount Size, Daisy Chain up to eight units, On Screen Display Menu, Password security, Searching PC server name, Hot key Control (Include Auto Scan Control function). It has complete keyboard and mouse emulation for simultaneous PCs boot-up process.

4.2 Feature

- With 8/16 port PS/2 KVM switch inside of 19" rack mount size design
- Support Microsoft Intellimouse, Microsoft Intellimouse Explorer, Logitech Net Mouse or the other fully compatible MS mouse.
- Support Win98/98SE/ME/2000/XP, WinNT, HP Unix, Linux, Sun Solaris, MAC O.S 8.6 or later version
- Manage multiple PCs, G3/G4 MACs, iMACs, SUN Microsystems with USB port from one USB keyboard, USB Mouse and Monitor.
- Hot Plug - Add PCs or Remove Connected PCs for Maintenance without Powering Down the KVM switch or PCs.
- Very High Video Quality - Up To 1920 x 1440, Bandwidth: 200MHz
- Support eight characters password protection and search PC server name
- Scan Intervals Mode for monitoring PCs and flexible Scan time from 5~99 seconds
- Keyboard status restored when switching PCs
- Buzzer sound for switching port confirmation.
- Built-in one extra daisy chain port and no waste any PC port

4.3 Technical Specifications

Model No.	8 port Rack Mount KVM Switch	16 port Rack Mount KVM Switch
PC Port	8	16
PC Port Connector (All Female Types)	VGA HDDB 15 pins	
Daisy Chain Port Connector (All Female Types)	1 x VGA HDDB 15 pins and 2 x Mini Din 6 pins special cable	
On Screen Display Control	Yes	
Scan Intervals	5~99 Sec.	
Keyboard Emulation	PS/2	
Mouse Emulation	PS/2	
VGA Resolution	1920 x 1440	
Bandwidth	200MHz	
Daisy Chain MAX Level	8 levels	

Table 4-1. Technical Specification

4.4 System Requirements

Model No.	8 port Rack Mount KVM Switch
Computer side	8 HDDB 15 pins male to one HDDB 15 pins male and Mini Din 6 pins special cable

Table 4-2. System Requirements

Model No.	16 port Rack Mount KVM Switch
Computer side	16 HDDB 15 pins male to one HDDB 15 pins male and Mini Din 6 pins special cable

Table 4-3. System Requirements

4.5 Cable Diagrams

PC Port Special Cable:

HDDB15 pins male to one HDDB 15 pins male and Mini Din 6 pins special cable



Figure 4-1. HDDB-15 / VGA + PS/2 x 1 (1.8M)

Daisy Chain Cable:

PS/2 Cable:

Mini Din 6 pin Male to Male

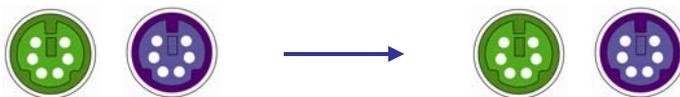


Figure 4-2. PS/2 Cable

VGA Cable:

HDDB 15 pin Male to Male

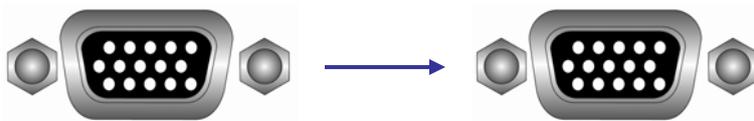


Figure 4-3. VGA Cable

4.6 Product Details

Rear Panel of 8 port Rack Mount KVM Console:



Rear Panel of 16 port Rack Mount KVM Console:



Figure 4-4. Rear Panel

4.7 Hardware Installation

Before installation, please make sure all of peripherals and computers have been turned off. This example of installation is based on 8 port console and you also can think that 1 port or 16 port console have the same installation procedures

Step 1

Each PC port connector is HDDB-15 pins type. Locate your input cable. It will have a HDDB-15 pins male connector at one end. Plug it into any label computer port on the rear of console unit. The other end of input cable will have three connectors; a HDDB-15 pins male type for PC video, a Mini Din 6 pins female type for keyboard and Mini Din 6 pins female type for mouse. To plug these three connectors into the respective ports of computer. Repeat the same procedure to all of PCs.

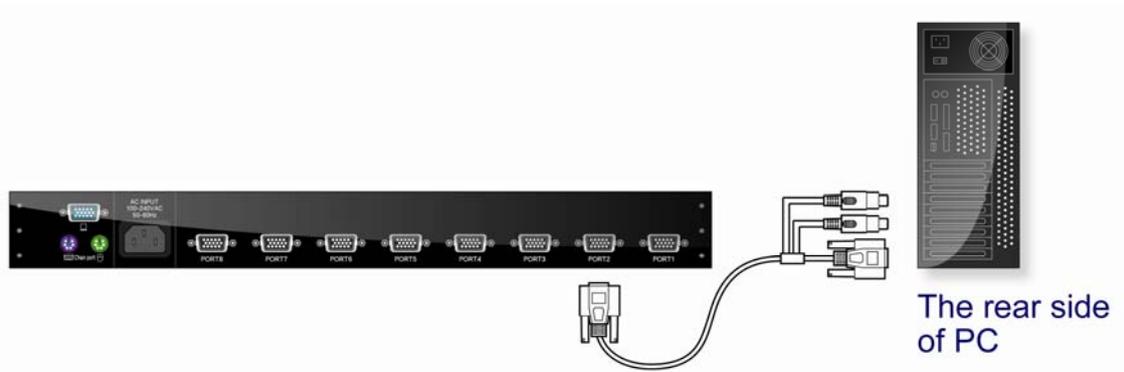


Figure 4-5. Hardware Installation

Step 2

Double-check all of the connections. You can check the color of keyboard and mouse connector to make sure the keyboard and mouse cables connect to the correct ports.

Step 3

Attach the power cord to the console unit and plug the other end into an electrical receptacle. Switch on your monitor. You can see the power LED on, and you can hear a beep.



.....

Please be remind to plug in power adapter. Although the PCs connected to KVM Switch are able to support enough power to the stand alone switch, KVM Switch still needs a power adapter for daisy chain more banks. If you forgot to plug in power adapter on the status of daisy chain, it may cause the unexpected status occurred.

.....

4.8 Usage**The power on state of 8 / 16 port KVM switch:**

When you power on KVM switch, it will ask you the password, **the default password is eight zeros –“ 00000000 “**. Please key in eight zeros and enter the same password at retype field.

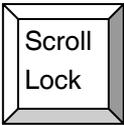
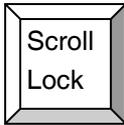
Note: Before you are not familiar with the operation of OSD menu, please don't change the password – i.e. keep default eight zeros (00000000). Otherwise, if you have set the password and unfortunately forget the password, you need contact to your distributor for maintaining the password.

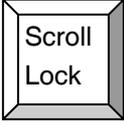
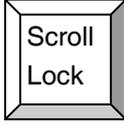
Keyboard Hot Key Commands:

You can also conveniently command console by switching ports through simple key sequences. To send commands to console, **the “Scroll Lock” key must be pressed twice within 2 seconds**. You will hear a beep for confirmation and the keyboard is in hot key mode. If you have not pressed any key in hot key mode within 2 seconds (It means to key in any key follows up “Scroll Lock” “Scroll Lock” key), the keyboard will back to under operation system control state.

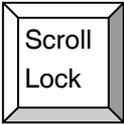
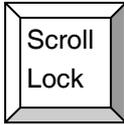
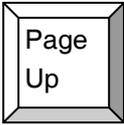
Below are the different hot key commands:

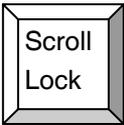
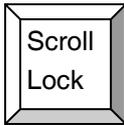
↔ within 2 seconds ↔

 +  +  = Previous Power On Channel (PC is Power On)

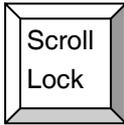
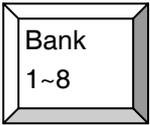
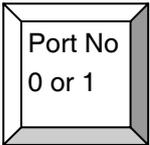
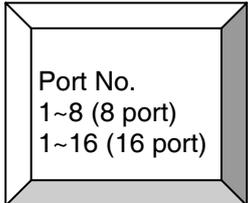
 +  +  = Next Power On Channel (PC is Power On)

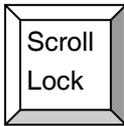
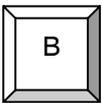
(Note: You also could press “up arrow key” or “down arrow key” longer time to speed up selecting the destination port)

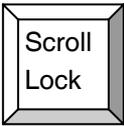
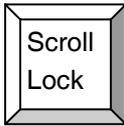
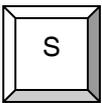
 +  +  = Previous Bank (PC is power on)

 +  +  = Next Bank (PC is power on)

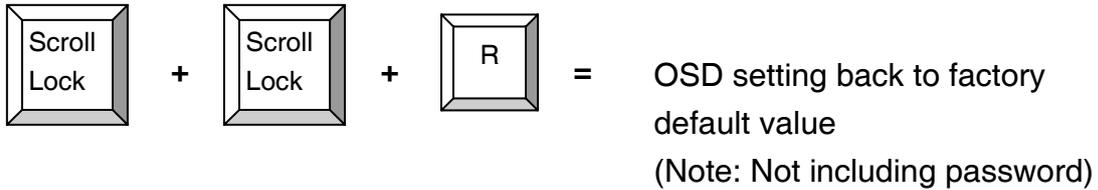
To select PC port:

 +  +   

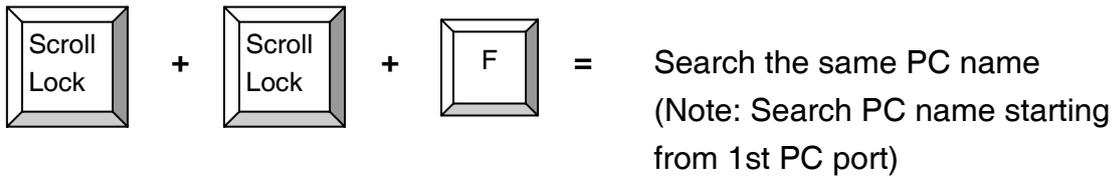
 +  +  = Beeper
(Note: The default Beeper function is ON and beeper control is only for available for Scan Mode)

 +  +  = Auto Scan (Note: This function is just for power on PC PORT)

To get out of Auto Scan Mode, Press any key or SPACE bar.



ROM REFLASH



FIND:



Figure 4-6. Hotkey

Example :

- A. To access a computer attached to Port 4 of the console. You can press through hot key as below:
Scroll lock + Scroll lock + 1 + 04
- B. To access a computer attached from Bank 3 to Bank 4. You can press through hot key as below:
Scroll lock + Scroll lock + Page Down



Bank no. and Port no. selection must be made using the numeric keys on the keyboard. Numeric keys on the keypad are not available as a hot key command

4.9 Daisy Chain Connection Diagram

Please use the attached 1.8 m 3-in-one daisy chain cable kit to daisy chain the KVM Switch.

- A. Use one end of 3-in-one Cable Kit to connect the daisy chain port on the console and the other end for the console port (silver color block) of bank 2 KVM switch.
- B. Please repeat item A to daisy chain more bank as you want. But, the maximum daisy chain bank is eight levels.

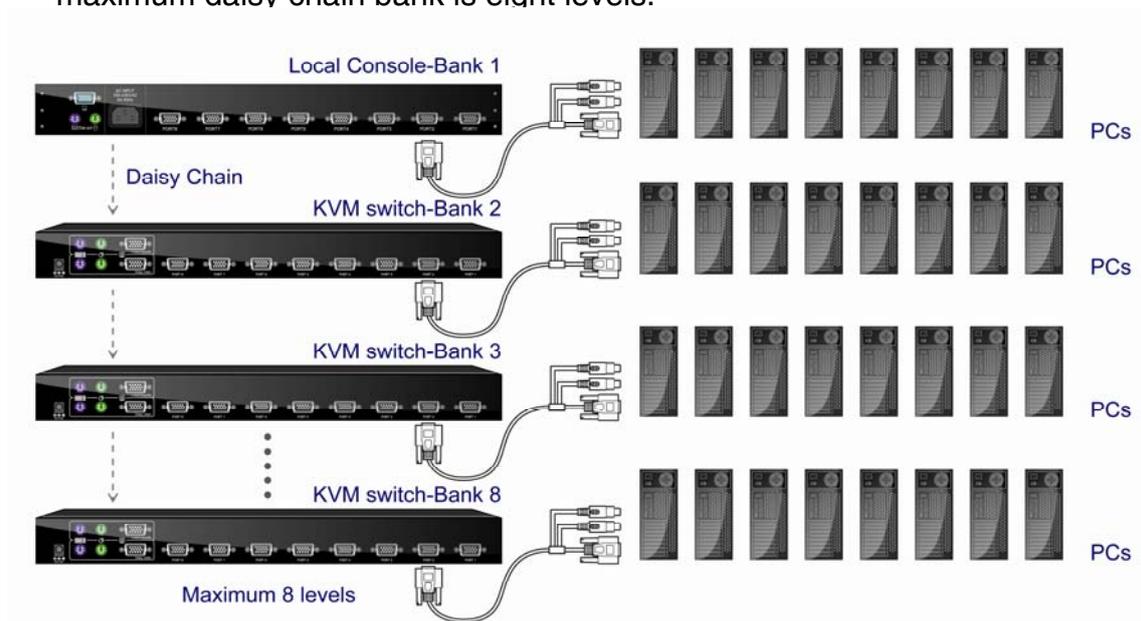


Figure 4-7. Daisy Chain



.....
If you would like to daisy chain 8 port and 16 port PS/2 or USB KVM Switch together, the master bank must be 16 port PS/2 or USB console.
.....

4.10 Hot Plug

The console supports “Hot Plug“ function for easy addition or removal of PCs.

The user can arrange or maintain PCs as follows:

- a. A PC can be disconnected and reconnected to the same or different port of the KVM unit without having to power it off as long as it is not the Daisy-chain port or pass through port.
- b. The pass through port PC (i.e. The pass through port means the console port is connected to PC directly) is powered on. Before you go hot plug function, please switch to this pass through port to next port (or say emulation port) and then switch back to the pass through port.
- c. You may unplug the mouse or the keyboard from the console port and plug it back in at any time.



.....
Some O.S. (Operation Systems) like SCOUnix are unable to support “ Hot Plug ” function. If you apply “Hot Plug” to this kind of O.S., it will cause unpredictable behavior or shut down thr PC. Before attempting to use “Hot Plug” , please make sure your O.S. and mouse software driver supports the “Hot Plug” function.
.....

4.11 On Screen Display Operation

1. OSD menu can be popped up in powered on PC port or non-powered on PC port or empty PC port. The resolution of OSD menu is fixed to 1024 x 768 for non-powered on PC port or empty PC port.
2. When you pop up the OSD menu window go through the hot key, you will see the following small window on your monitor.

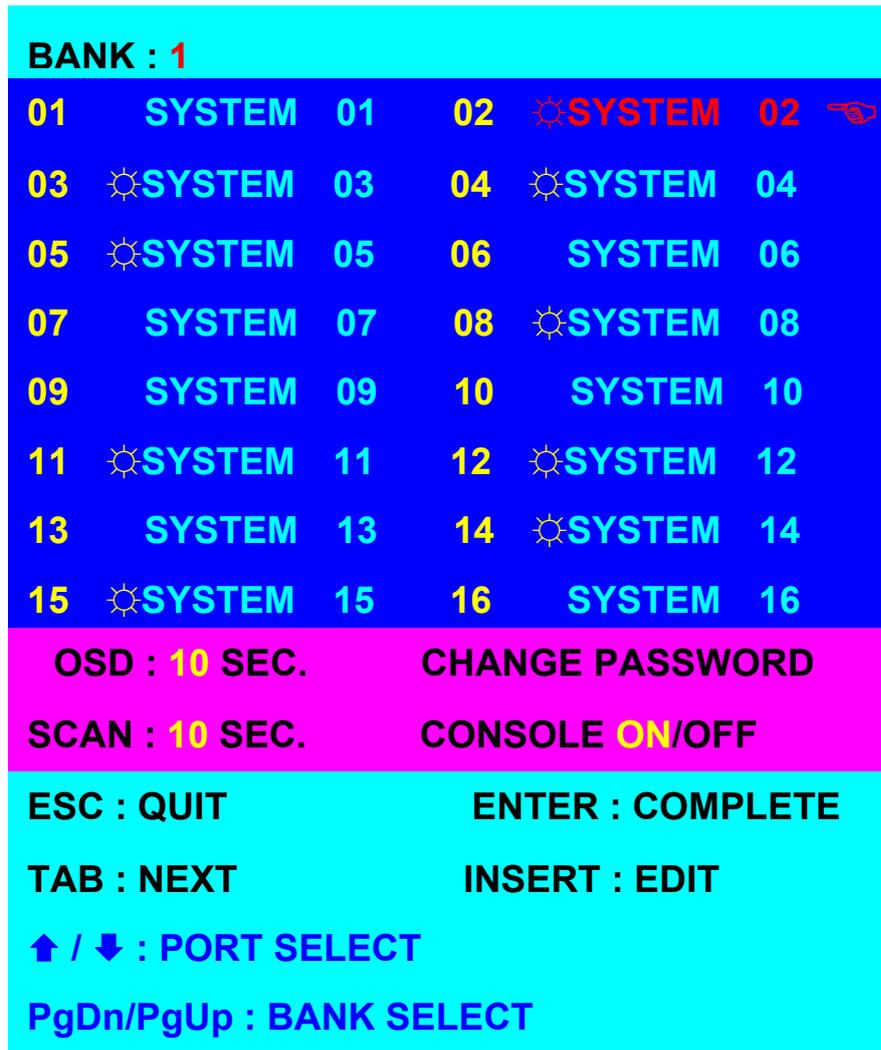


Figure 4-8. OSD Operation

- a. The first line bar is Bank number.
- b. The second block is your PC system name list. You will find the system number list from 01 to 08 (if the current box is 8 ports) or from 01 to 16 (if the current box is 16 ports). You can define your PC name in maximum 8 characters. The factory default of 16 port console PC name is from

“SYSTEM 01”, “SYSTEM 02”, ..., “SYSTEM 16” and 8 port console is from “SYSTEM 01”, “SYSTEM 02”, ..., “SYSTEM 08”. Besides, the sun symbol “☀” near to the PC system is power on.

To use up arrow key “↑” or down arrow key “↓” to select port for destination PC name. After you have selected the PC port already, you can press the ENTER key to switch the PC port you want immediately.

To use “PgUp” key or “PgDn” key for selected previous or next Bank number.(or Box number)

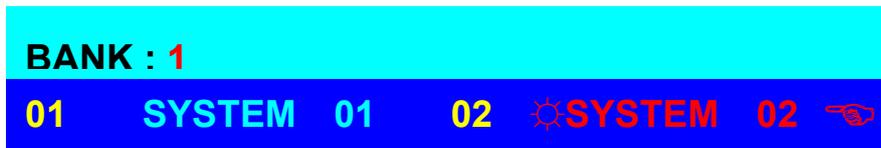


Figure 4-9. OSD Operation

To press “INS” key for editing PC name. After finishing the edit, please press “ENTER” key for saving information.

To use “TAB” key to select items like Bank, OSD, SCAN, CHANGE PASSWORD, CONSOLE ON /OFF, etc...

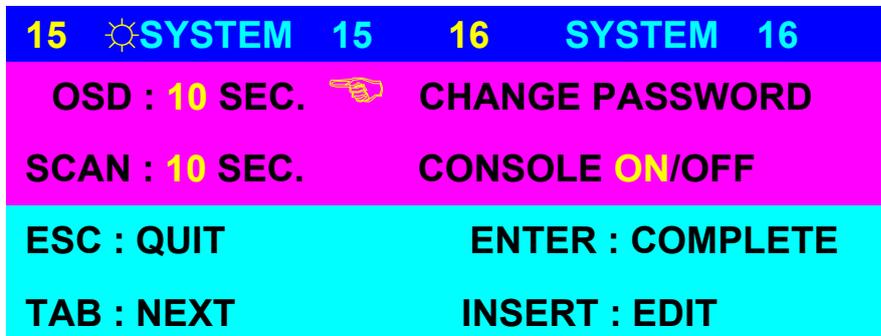


Figure 4-10. OSD Operation

- a. The “OSD: 10 SEC.” means that the PC system name exists 10 seconds on your monitor. You can modify it from 5 seconds to 99 seconds. The factory default value is 10 seconds.
- b. The “SCAN: 10 SEC.” means that scan interval from one PC port to next PC port. The default SCAN time is 10 seconds and the maximum scan time is 99 seconds.
- c. The “CHANGE PASSWORD” is for user to avoid all PC systems to be

intruded by the other person. The default password is 8 digits "00000000".



Figure 4-11. OSD Operation

There is an enter password window showed out when you select this item and then press the enter. The maximum password is eight digits. After you key in the password already and press the enter key, there is another window for confirming your typed password.



Figure 4-12. OSD Operation

You need to re-type the password again for double check your previous key-in password is matched or not.



Figure 4-13. OSD Operation

- d. The "CONSOLE ON/OFF " means to manage the console of KVM switch. If you select "CONSOLE ON ", it means that any user can use the console. If you select "CONSOLE OFF "(factory default OFF state), it means that any user will not be allowed to use the console unless you enter the password. When you enter the password already and pass the KVM switch authentication, the CONSOLE will be set to ON. After you finish using KVM switch, do not forget to set CONSOLE ON state to OFF state. Besides, if

current CONSOLE is ON state and you reset KVM switch, the CONSOLE will be set up ON state back to OFF state.

- e. When you finish the set up of PC name and get out of OSD setting mode, you will find the PC name showed at the up-left corner of monitor. Now, you can use “ESC” key to clear the message right away if you don't need it.



Figure 4-14. OSD Operation

- f. If you want OSD back to factory default value, you can press “SCROLL LOCK”, “SCROLL LOCK” and “R” keys.



Figure 4-15. OSD Operation

4.12 Troubleshooting

1. Ensure that all cables are well seated. Label all of cables with the number for each respective computer to avoid confusion.
2. The recommended VGA cable distance is 5 meters maximum without ghosting and degradation. Normally, the cable length is based on driver capacity of your VGA card. If you need longer VGA cable, please use VGA extender to accomplish your applications.
3. The recommended PS/2 cable distance is 5 meters maximum. Normally, the cable length is based on driver capacity of your motherboard PS/2 port. If you need longer PS/2 cable, please use PS/2 extender to accomplish your applications.
4. Don't press any keys on the keyboard while the selected computer is booting up. Otherwise, it might cause the keyboard error or keyboard is not detected at PC side.
5. The computer boot up fine, but keyboard doesn't work
 - Make sure the keyboard works when directly plugged into the computer.
 - Try a different keyboard, but use only 101, 102 or 104-key keyboard.
6. The Mouse is not detected during PC boot up.
 - Make sure the mouse works when directly plugged into the computer
 - Make sure the mouse is a true PS/2 mouse. A combo mouse will work just as long as it is set for PS/2 mode with the correct adapter. Try a different mouse.
 - Avoiding moving the mouse or pressing the mouse buttons when switching ports.
 - Avoiding switching ports during shutting down the PC process.
 - When you switch one PC port to another PC port, the best scan time setting need to be set to 5 seconds or more. Normally, the VGA monitor change one resolution mode to another will take one or two seconds. So, the scan time is not recommended to below 5 seconds.

Single Rail LCD Console

User's Manual