



LCD KVM Console (T1700/T1900)

User Guide
Release 1.1

Copyright © 2010 Raritan, Inc.

T1700_T1900-0E-v1.1-E

July 2010

255-37-0114-00

This document contains proprietary information that is protected by copyright. All rights reserved. No part of this document may be photocopied, reproduced, or translated into another language without express prior written consent of Raritan, Inc.

© Copyright 2010 Raritan, Inc., CommandCenter®, Dominion®, Paragon® and the Raritan company logo are trademarks or registered trademarks of Raritan, Inc. All rights reserved. Java® is a registered trademark of Sun Microsystems, Inc. Internet Explorer® is a registered trademark of Microsoft Corporation. Netscape® and Netscape Navigator® are registered trademarks of Netscape Communication Corporation. All other trademarks or registered trademarks are the property of their respective holders.

FCC Information

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a commercial installation. This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. Operation of this equipment in a residential environment may cause harmful interference.

VCCI Information (Japan)

この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づくクラスA情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

Raritan is not responsible for damage to this product resulting from accident, disaster, misuse, abuse, non-Raritan modification of the product, or other events outside of Raritan's reasonable control or not arising under normal operating conditions.



Contents

Important Safeguards	v
What the Warranty Does Not Cover	v
Safety Instructions	vi
Chapter 1 Introduction	1
Package Content	1
T1700.....	1
T1900.....	1
Structure Diagram.....	2
Chapter 2 Installation	3
Before Installation	3
Rack-Mounting the LCD KVM Console	3
1. Installing the Rear L-bracket.....	4
2. Aligning the Rear L-brackets	4
3. Fixing the LCD KVM Console into the Rack.....	5
How to Install "One Man" Installation Slides.....	6
Installing the Front Mounting Ear x 2 pcs	7
Installing into Rack	7
Connecting to the KVM Switch via PS/2 Interface.....	10
Connecting to the KVM Switch via USB Interface	11
Connecting to the Server via PS/2 Interface	12
Connecting to the Server via USB Interface.....	12
Chapter 3 Operation	14
How to Use the LCD KVM Console	14
Touchpad Buttons	15
Onscreen Display Operation	16
Onscreen Menu	17

Contents

How to Use the Slides.....	18
Appendix A Standard Specifications	20
<hr/>	
Specifications.....	20
Dimension	21
Appendix B Troubleshooting	22
<hr/>	
Index	23
<hr/>	

Important Safeguards

Read all these instructions carefully before you use the device. Save this manual for future reference.

What the Warranty Does Not Cover

- Any product, on which the serial number has been defaced, modified or removed.
- Damage, deterioration or malfunction resulting from:
 - Accident, misuse, neglect, fire, water, lightning, or other acts of nature, unauthorized product modification, or failure to follow instructions supplied with the product.
 - Repair or attempted repair by anyone not authorized by us.
 - Any damage of the product due to shipment.
 - Removal or installation of the product.
 - Causes external to the product, such as electric power fluctuation or failure.
 - Use of supplies or parts not meeting our specifications.
 - Normal wear and tear.
 - Any other causes which does not relate to a product defect.
- Removal, installation, and set-up service charges.

Safety Instructions

- Unplug equipment before cleaning. Don't use liquid or spray detergent; use a moist cloth.
- Keep equipment away from excessive humidity and heat. Preferably, keep it in an air-conditioned environment with temperatures not exceeding 40° Celsius (104° Fahrenheit).
- When installing, place the equipment on a sturdy, level surface to prevent it from accidentally falling and causing damage to other equipment or injury to persons nearby.
- When the drawer is in an open position, do not cover, block or in any way obstruct the gap between it and the power supply. Proper air convection is necessary to keep it from overheating.
- Arrange the equipment's power cord in such a way that others won't trip or fall over it.
- If you are using a power cord that didn't ship with the equipment, ensure that it is rated for the voltage and current labeled on the equipment's electrical ratings label. The voltage rating on the cord should be higher than the one listed on the equipment's ratings label.
- Observe all precautions and warnings attached to the equipment.
- If you don't intend on using the equipment for a long time, disconnect it from the power outlet to prevent being damaged by transient over-voltage.
- Keep all liquids away from the equipment to minimize the risk of accidental spillage. Liquid spilled on to the power supply or on other hardware may cause damage, fire or electrical shock.
- Only qualified service personnel should open the chassis. Opening it yourself could irreparably damage the equipment and invalidate its warranty.
- If any part of the equipment becomes damaged or stops functioning, have it checked by qualified service personnel.

Chapter 1 Introduction

The User Guide introduces the Raritan LCD KVM Console, a 1U rackmount LCD KVM drawer for use with the KVM switch or server in the data center, server room or the like. There are two types of the product: T1700 and T1900. These models are identical in almost every aspect except that T1700 comes with a 17" LCD monitor and T1900 comes with a 19" one.

In This Chapter

Package Content	1
Structure Diagram	2

Package Content

Raritan LCD KVM Console comes with the standard parts shown in this section. Check and make sure they are included and in good condition. If anything is missing, or damaged, contact the supplier immediately.

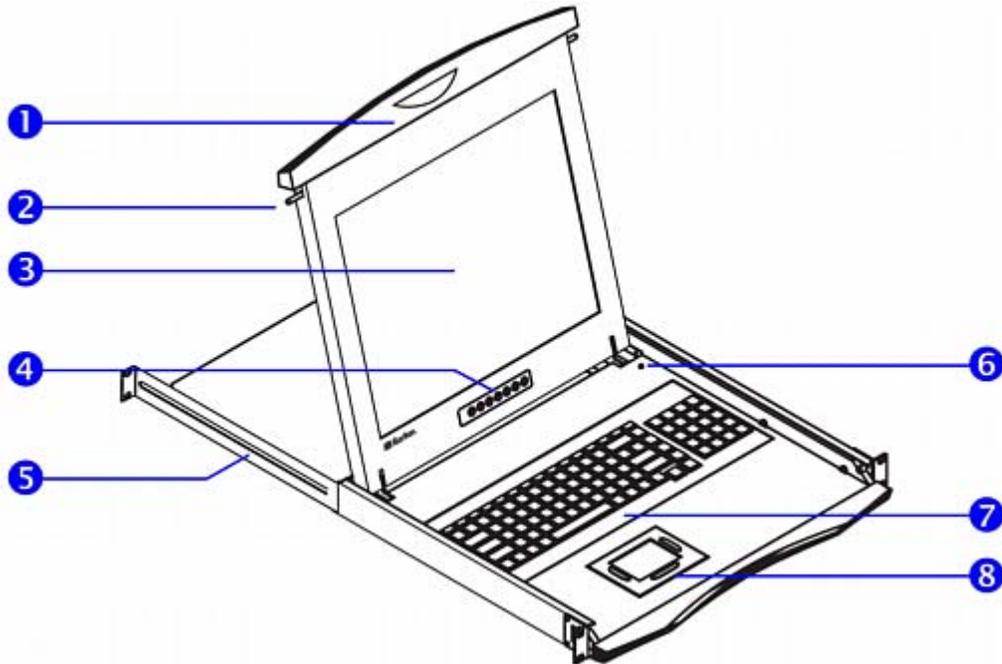
T1700

1. LCD KVM drawer x 1 pc
2. Fasteners for rear L-bracket x 4 pcs
3. Rear mounting L-bracket x 1 pair
*T1700 series mounting depth-adjustable from 395 to 880mm
4. 3-in-1 KVM cable x 1 pc
5. Power cord x 1 pc

T1900

1. LCD KVM drawer x 1 pc
2. Rear mounting L-bracket x 1 pair
*T1900 series mounting depth-adjustable from 315 to 880 mm
3. Single or "one man" installation slides x 1 package
4. 3-in-1 KVM cable x 1 pc
5. Power cord x 1 pc

Structure Diagram



1. Carry handle to release the 2-pt lock
2. 2-point lock
3. LCD screen
4. LCD membrane
5. Adjustable rear mounting L-bracket
6. Micro switch for screen auto power off
7. Keyboard
8. Touchpad

Chapter 2 Installation

In This Chapter

Before Installation	3
Rack-Mounting the LCD KVM Console	3
How to Install "One Man" Installation Slides	6
Connecting to the KVM Switch via PS/2 Interface	10
Connecting to the KVM Switch via USB Interface.....	11
Connecting to the Server via PS/2 Interface	12
Connecting to the Server via USB Interface.....	12

Before Installation

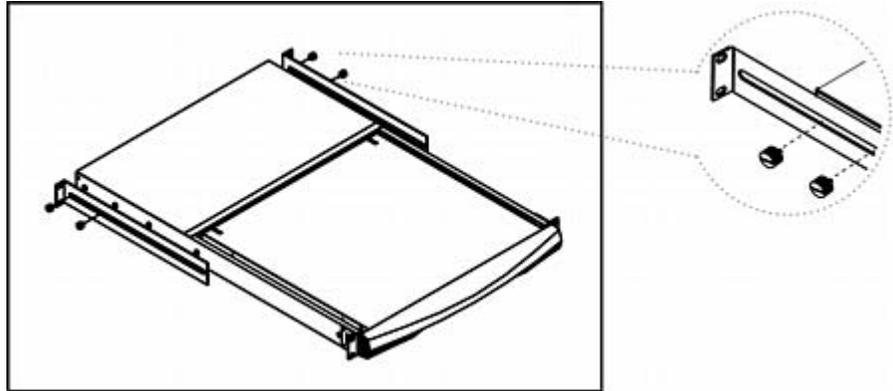
- It is very important to locate the LCD KVM Console in a suitable environment.
- The surface for placing and fixing the LCD KVM Console should be stable and level or mounted into a suitable cabinet.
- Make sure the place has good ventilation, is out of direct sunlight, away from sources of excessive dust, dirt, heat, water, moisture, and vibration.
- Convenience for connecting the LCD KVM Console to the related facilities should be well considered too.

Rack-Mounting the LCD KVM Console

There are three major steps to rack-mount the LCD KVM Console.

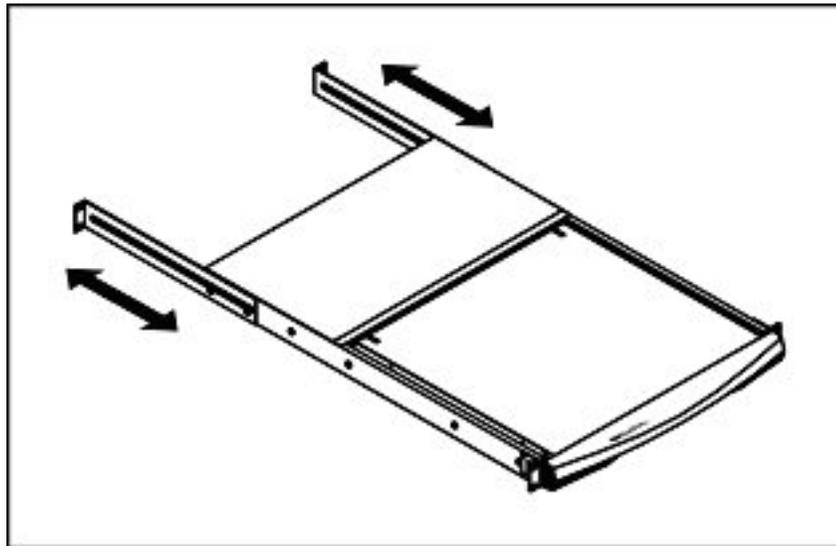
1. Install the rear L-bracket to the LCD KVM Console.
2. Align the rear L-brackets to a suitable length for the rack.
3. Fix the LCD KVM Console into the rack.

1. Installing the Rear L-bracket



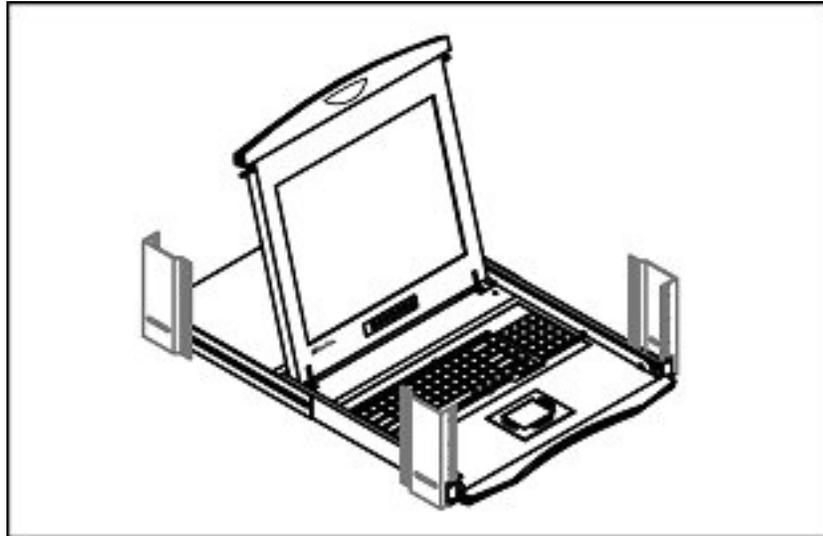
- a. Install each rear L-bracket using two fasteners shown in the diagram.
- b. Leave the fasteners slightly loose.

2. Aligning the Rear L-brackets



- a. Measure the front and rear mounting depth of the rack.
- b. Align each rear L-bracket to a suitable length and tighten the fasteners shown in the diagram.

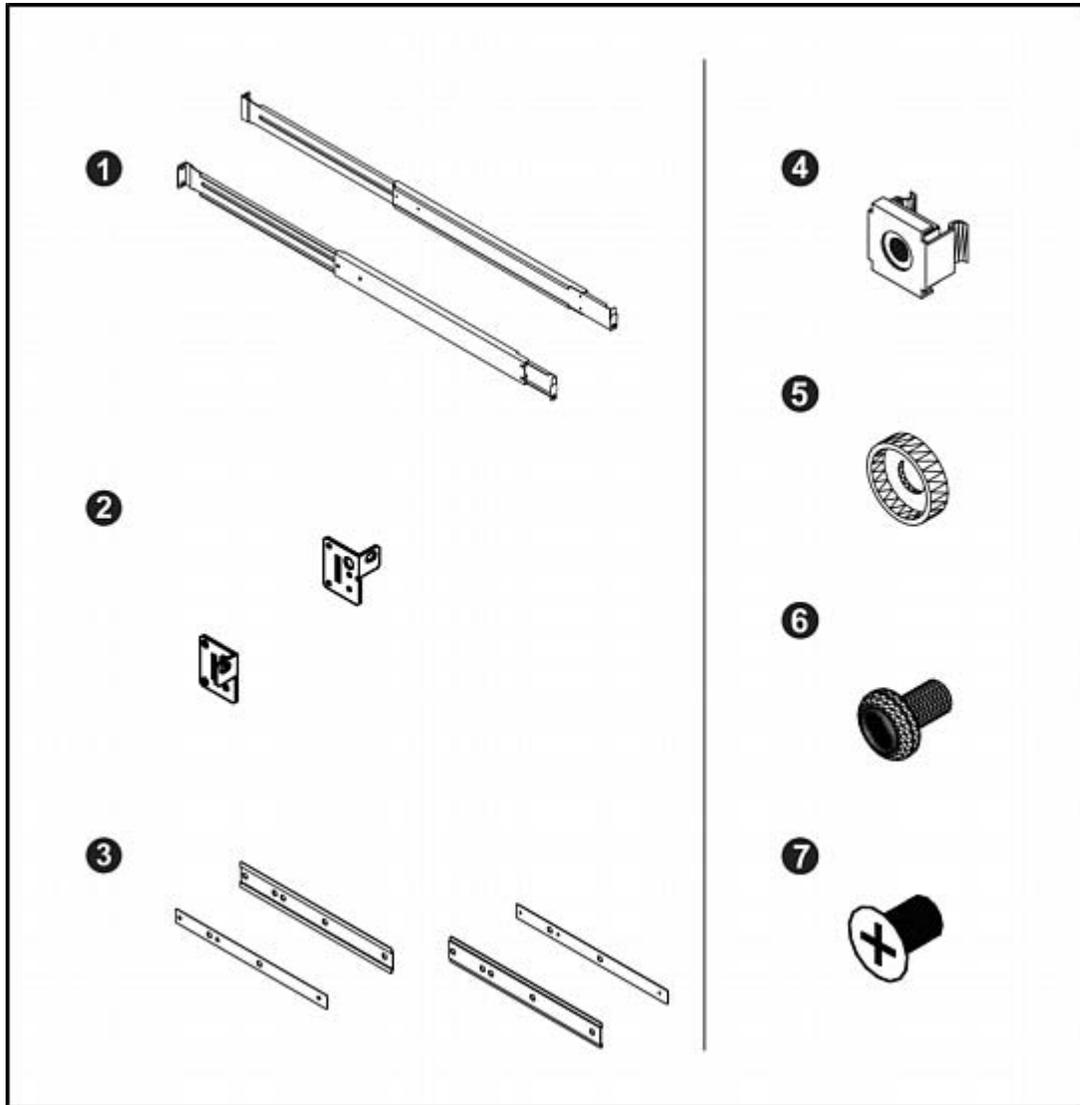
3. Fixing the LCD KVM Console into the Rack



- Fix the LCD KVM Console into the rack.

Note: Hardware (screws and cage nuts) for fixing the mounting bracket into the rack is not provided.

How to Install "One Man" Installation Slides



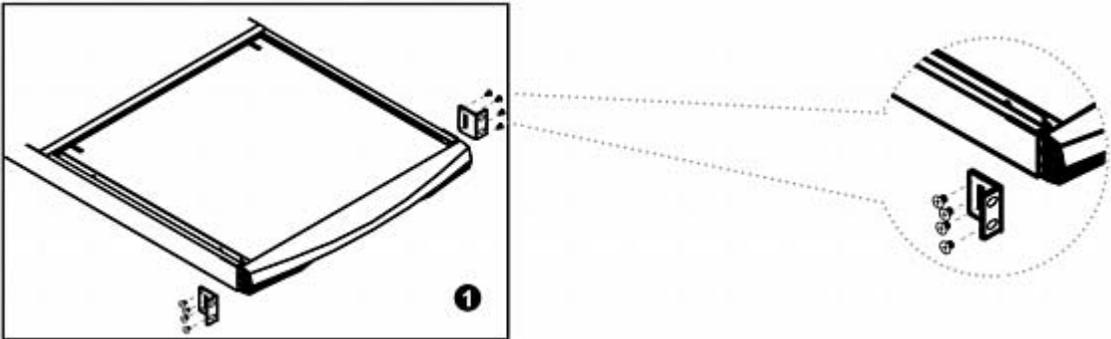
Component list

1	Mounting bracket x 2 pcs
2	Front mounting ear (left & right) x 2 pcs
3	Support bracket x 4 pcs
4	M6 cage nut x 6 pcs
5	M6 washer x 8 pcs

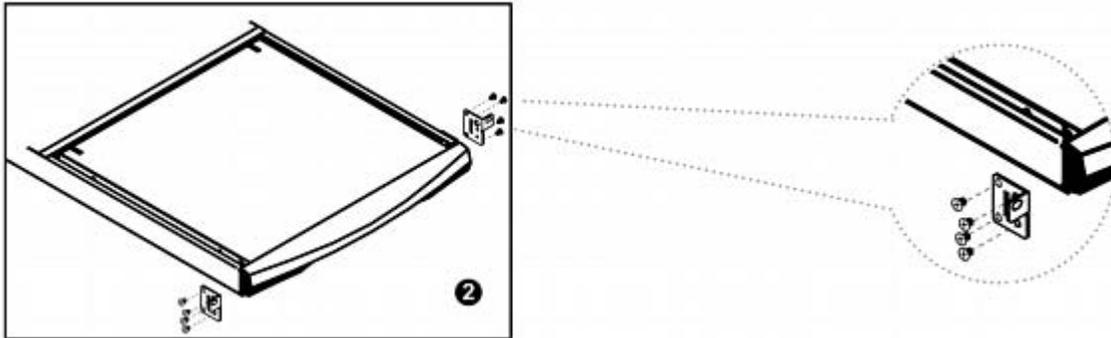
Component list	
6	M6*15mm screw x 8 pcs
7	M3.2*4.5mm screw x 14 pcs

Installing the Front Mounting Ear x 2 pcs

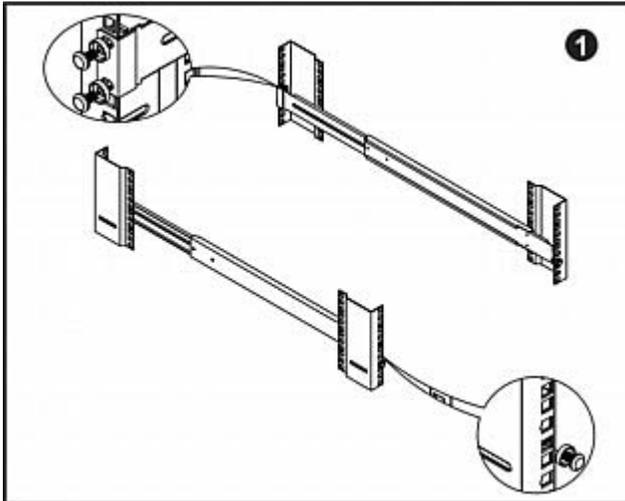
- 1. Disassemble the standard front mounting ears carefully.



- 2. Install the optional front mounting ears with M3.2*4.5 mm screw x 8 pcs.

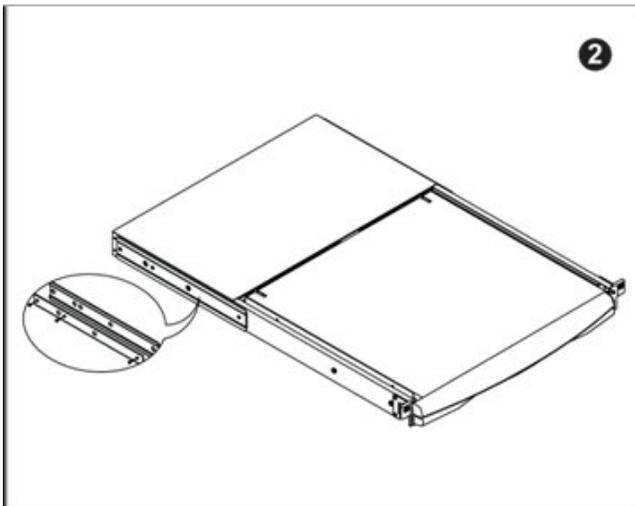


Installing into Rack

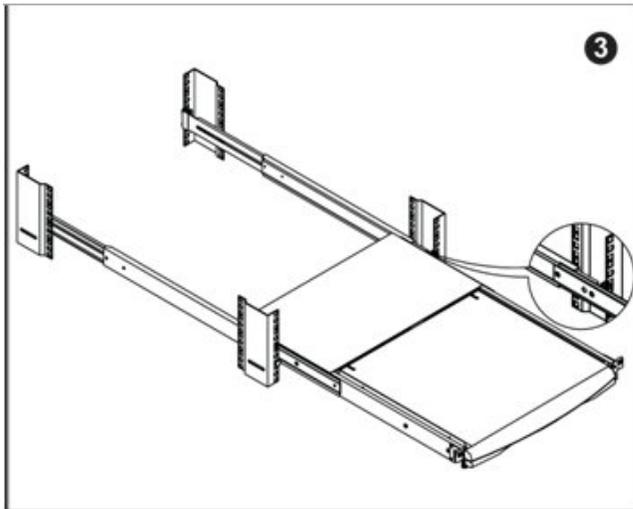


- Attach the mounting bracket to vertical mounting rails.
- Adjust the rear mounting bracket to fit your rack.
- Repeat the above steps for the other side.

Caution: Leave the screws slightly loose (not release).

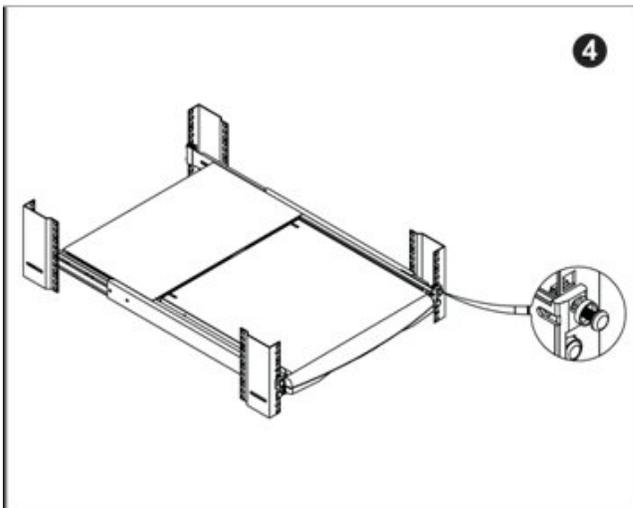


- Attach support brackets to chassis with M3.2*4.5mm screw x 3 pcs.
- Repeat the above step for the other side.

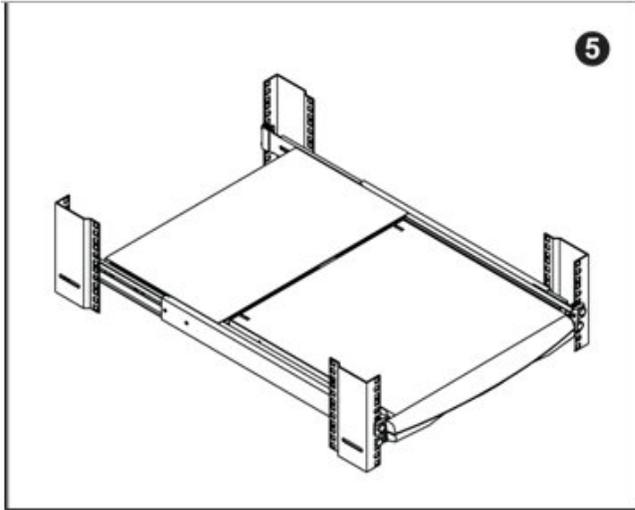


- Pick up the chassis.
- Insert inner members of slides into the already mounted internal slide members in the rack.
- Push the white-arrow button on each slide that is installed on the LCD keyboard drawer to unlock (Push at the same time).

Caution: Be careful when pushing the chassis into the left and right slides. Avoid pressing the red button located on either side of the slide.



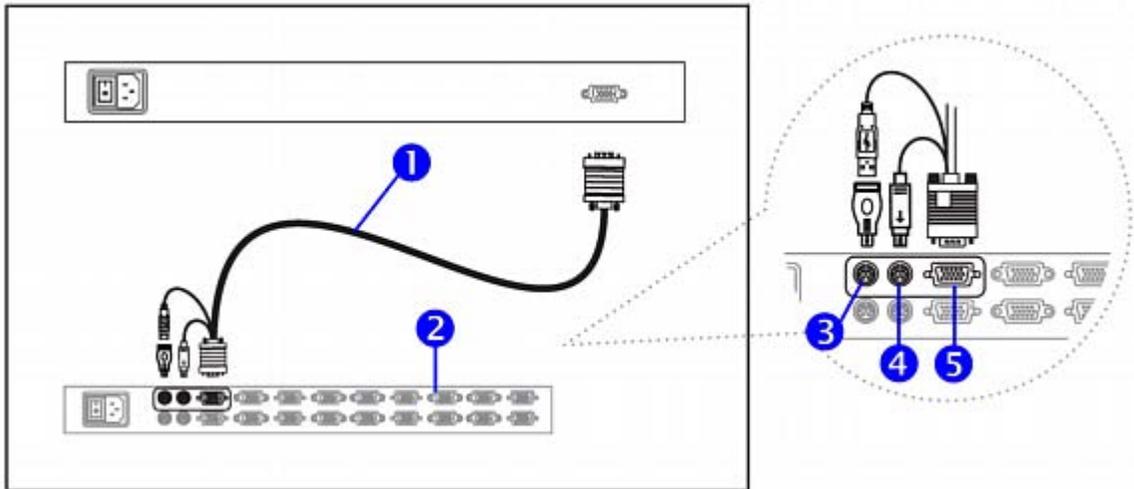
- Hold down the white-arrow button and push the chassis to the end.
- Attach left and right mounting ears to vertical mounting rails.
- Tighten the screws on both sides.



- Installation completed.

Connecting to the KVM Switch via PS/2 Interface

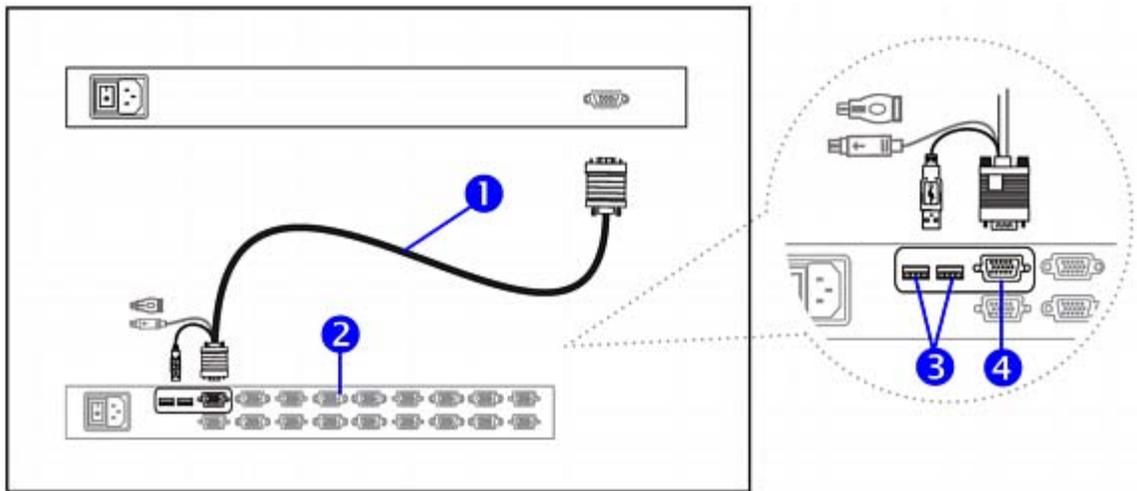
This is an illustration of connecting the 3-in-1 KVM cable to the KVM switch via PS/2 Interface.



1. 3-in-1 KVM cable
2. KVM switch
3. Keyboard port
4. Mouse port
5. VGA port

Caution: The LCD KVM Console is hot-pluggable, but components of connected devices, such as the servers and KVM switch, may not be hot-pluggable. Plugging and unplugging cables while servers and KVM switches are powered on may cause irreversible damage to the servers, KVM switches and LCD KVM Console. Before attempting to connect anything to the product, we suggest turning off the power to all devices. Apply power to connected devices again only after the LCD KVM Console is receiving power. The company is not responsible for damages caused in this way.

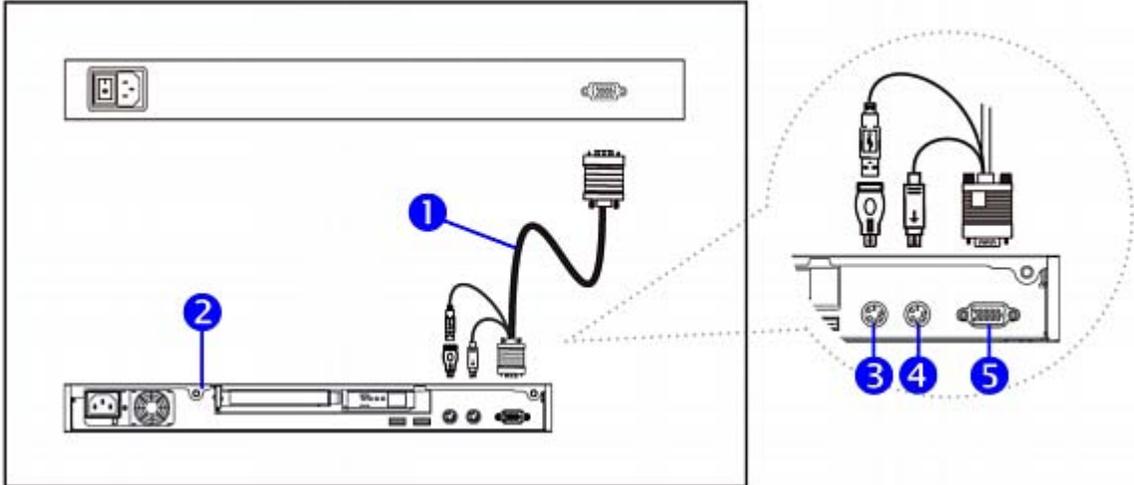
Connecting to the KVM Switch via USB Interface



1. 3-in-1 KVM cable
2. KVM switch
3. USB ports
4. VGA port

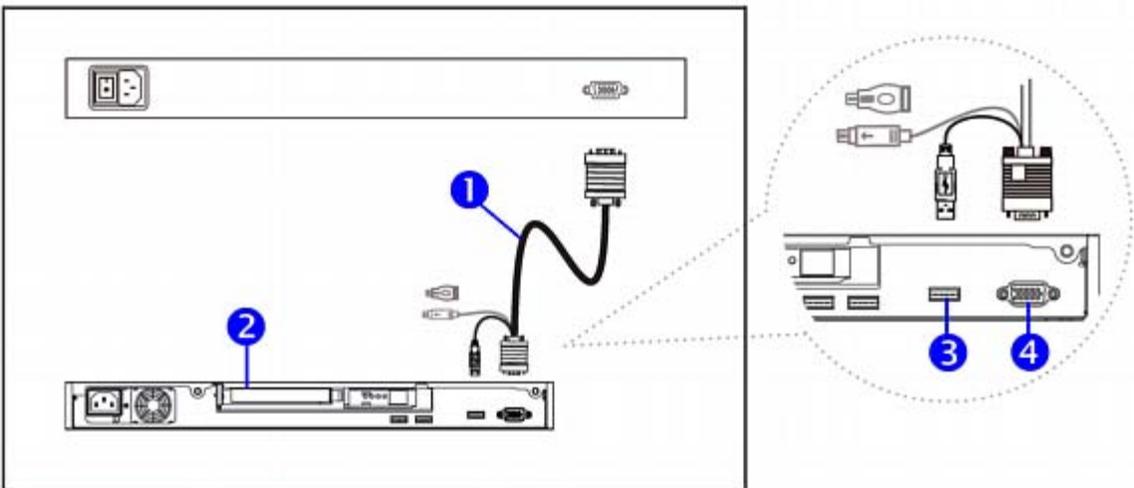
Connecting to the Server via PS/2 Interface

This is an illustration of connecting the 3-in-1 KVM cable to a server via PS/2 interface.



1. 3-in-1 KVM cable
2. Server
3. Keyboard port
4. Mouse port
5. VGA port

Connecting to the Server via USB Interface



1. 3-in-1 KVM cable
2. Server
3. USB port
4. VGA port

Chapter 3 Operation

In This Chapter

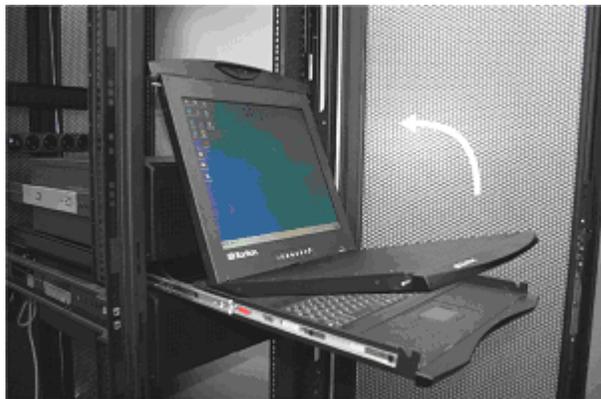
How to Use the LCD KVM Console.....	14
How to Use the Slides	18

How to Use the LCD KVM Console

1. Gently pull the tab toward the front of the LCD.



2. Flip up the LCD to a suitable angle.

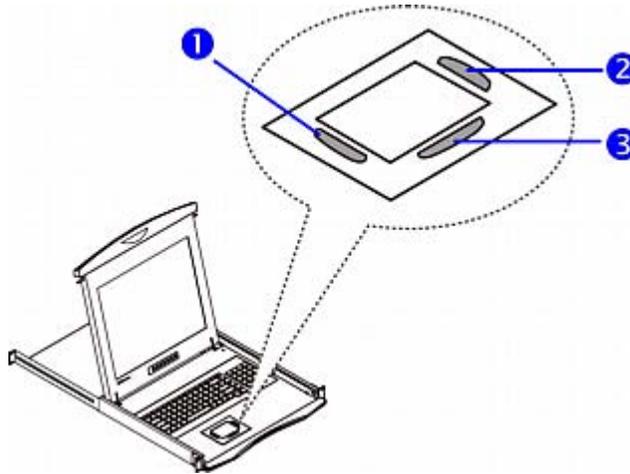


- Operate the LCD KVM Console. For information on LCD membrane buttons and onscreen menu, see **Onscreen Display Operation** (on page 16) and **Onscreen Menu** (on page 17).



Touchpad Buttons

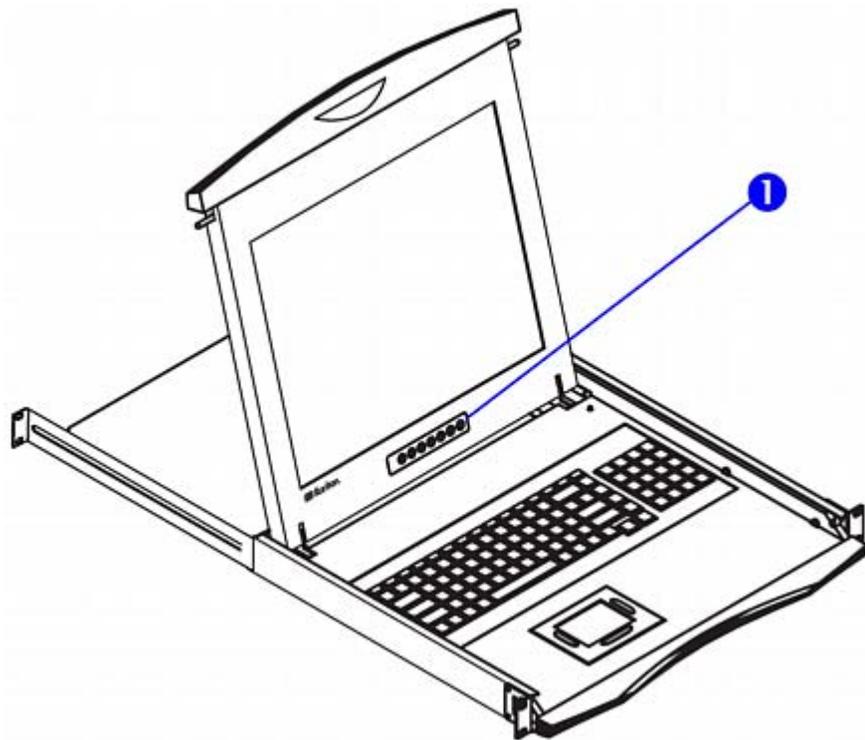
The buttons adjacent to the touchpad function the same as those on a three-button mouse.



Number	Function
1	The button is similar to the left button on a mouse, which is used for item selection or program activation.
2	The button is similar to the right button on a mouse, which can trigger a context menu.

Number	Function
3	<p>The button is similar to the middle button on a mouse, which is used to control the scrolling action.</p> <ol style="list-style-type: none">Press this button once, and a scrolling icon appears, indicating that you have entered the scrolling mode.Use the touchpad to scroll through a web page or document.To quit the scrolling mode, press any touchpad button, and the scrolling icon disappears.

Onscreen Display Operation



1. LCD membrane

Membrane button or LED	Function
	Light off = Power off Blue = Power on
	Power on/off LCD
	Display the OSD menu
	Scroll through menu options and adjust the display control
	Exit the OSD screen. Shortcut key to auto-adjustment by pressing the button for 5 seconds or toggle analog, digital & video connection (DVI-D and video options only).

Onscreen Menu



BRIGHTNESS / CONTRAST

- Brightness: Adjust background black level of the screen image.
- Contrast: Adjust the difference between the image background (black level) and the foreground (white level).

AUTO ADJUST

- Auto Adjust: Fine tune the video signal to eliminate waviness and distortion. The "Auto Adjusting" message is displayed during the process.
- Auto Tune: Optimize phase, clock, position and size. An "Adjusting" message is displayed during the process.

PHASE/CLOCK

- Phase/Clock: To enter into the phase & clock sub menu

H/V POSITION

- H/V Position: Align the screen image left or right and up or down.

MISC

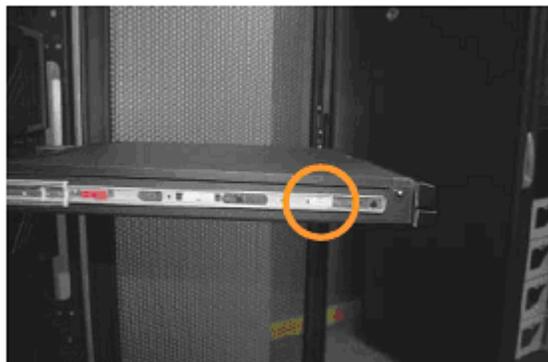
- Information: Display the current resolution, refresh rate and frequency information on the screen.
- OSD Timer: Set the time duration in seconds that the LCD OSD is visible after the last time any button of the LCD controls is pressed. The factory default is 10 seconds.
- Color: Select the screen color - 5500K, 6500K & 9500K. The factory default is 9500K.
- Language: Select the language in which the OSD menu is displayed - English, Chinese, Japanese, German, French, Spanish, and Italian.

Reset

- Restore the LCD OSD settings to factory defaults.

How to Use the Slides

1. Locate a white-arrow release button on the outside of each slide.



2. Push the white-arrow buttons together at both sides before pushing the LCD KVM Console into place. Avoid pushing the red button located on each slide.



3. Keep pushing the white-arrow buttons until the LCD KVM Console is placed into the rack.



Appendix A Standard Specifications

In This Chapter

Specifications	20
Dimension.....	21

Specifications

Item	Description	
	T1700	T1900
Form Factor	1U rack mounting on slide-out rails	
Diagonal Size	17" TFT	19" TFT
Max. Resolution	1280 x 1024	
Brightness (cd/m²)	300	
Color Support	16.2 Mil.	16.7 Mil.
Contrast Ratio (typ.)	700:1	1000:1
Viewing Angle (H/V)	150° x 135°	
Display Area (mm)	337 x 270	376 x 301
Tr Response Time (ms)	2	1.3
LCD Panel MTBF (hrs)	N/A	50,000
VGA Signal Input	Analog RGB, 0.7Vp-p	
Sync. Type	Separate H/V, Composite, SOG	
Resolution	640 x 350, 70Hz	
	720 x 400, 70Hz	
	640 x 480, 60 / 72 / 75Hz	
	800 x 600, 60 / 70 / 72 / 75Hz	
	1024 x 768, 60 / 70 / 72 / 75Hz	
	1152 x 864, 60 / 70 / 75Hz	
	N/A	1152 x 900, 66 / 76Hz

Item	Description	
	T1700	T1900
	1280 x 1024, 60 / 70 / 75Hz	
Plug & Play DOC	EDID 1.3	
Console Port (Combo)	3-in-1 DB-5 connector for VGA / keyboard /mouse Support USB & PS2 servers or KVM switches	
Power Input	Auto-sensing 100 to 240VAC, 50 / 60Hz	
Power Consumption	Max. 40 Watt, Standby 5 Watt	
Compatibility	Multi-platform - Mix PCs, SUNs, IBMs, HPs & DELLs.	
Regulation Approval	FCC, CE, UL	

Dimension

Model	Product Dimension (W x D x H)	Packing Dimension (W x D x H)	Net Weight	Gross Weight
T1700	442 x 650 x 44 mm	589 x 826 x 168 mm	16 kg	23 kg
	17.4 x 25.6 x 1.73 inch	23.2 x 32.5 x 6.6 inch	35 lb	51 lb
T1900	442 x 650 x 44 mm	589 x 826 x 168 mm	17 kg	23 kg
	17.4 x 25.6 x 1.73 inch	23.2 x 33.7 x 6.6 inch	37 lbs	51 lbs

Appendix B Troubleshooting

- **How do I adjust the resolution?**

To change monitor resolution, choose Start > Control Panel > Display. Select the Setting tab to adjust the monitor resolution in Desktop Area. Available resolutions, including "640 x 480", "800 x 600", "1024 x 768", "1152 x 864", and "1280 x 1024", are determined by the display card in your computer.

- **Is interference signal that appears on LCD normal when shutting down the computer?**

In rare cases, interference may appear on the monitor. This may be caused by signal rate of VGA card and is considered normal. The image quality can be improved by adjusting the phase or pixel rate automatically or manually.

- **The membrane button power light is not ON**

- Press the power On / Off button on the LCD membrane to check if the monitor is in the ON mode.
- Check the power cord is properly connected to the LCD KVM Console and power outlet.

- **Screen image is not centered or sized properly**

- Press the  button for two seconds to automatically adjust the image.
- Adjust the H-position and V-position settings via the onscreen menu.

- **Is the Raritan LCD KVM Console hot-pluggable?**

The LCD KVM Console is hot-pluggable, but components of connected devices, such as servers and KVM switches, may not be hot-pluggable. We suggest turning off the power to all devices before connecting them. Apply power to connected devices again only after the LCD KVM Console receives power.

Index

1

1. Installing the Rear L-bracket • 4

2

2. Aligning the Rear L-brackets • 4

3

3. Fixing the LCD KVM Console into the Rack • 5

B

Before Installation • 3

C

Connecting to the KVM Switch via PS/2 Interface • 10

Connecting to the KVM Switch via USB Interface • 11

Connecting to the Server via PS/2 Interface • 12

Connecting to the Server via USB Interface • 12

D

Dimension • 21

H

How to Install • 6

How to Use the LCD KVM Console • 14

How to Use the Slides • 18

I

Important Safeguards • v

Installation • 3

Installing into Rack • 7

Installing the Front Mounting Ear x 2 pcs • 7

Introduction • 1

O

Onscreen Display Operation • 15, 16

Onscreen Menu • 15, 17

Operation • 14

P

Package Content • 1

R

Rack-Mounting the LCD KVM Console • 3

S

Safety Instructions • vi

Specifications • 20

Standard Specifications • 20

Structure Diagram • 2

T

T1700 • 1

T1900 • 1

Touchpad Buttons • 15

Troubleshooting • 22

W

What the Warranty Does Not Cover • v

▶ **U.S./Canada/Latin America**

Monday - Friday
8 a.m. - 6 p.m. ET
Phone: 800-724-8090 or 732-764-8886
For CommandCenter NOC: Press 6, then Press 1
For CommandCenter Secure Gateway: Press 6, then Press 2
Fax: 732-764-8887
Email for CommandCenter NOC: tech-ccnoc@raritan.com
Email for all other products: tech@raritan.com

▶ **China**

Beijing

Monday - Friday
9 a.m. - 6 p.m. local time
Phone: +86-10-88091890

Shanghai

Monday - Friday
9 a.m. - 6 p.m. local time
Phone: +86-21-5425-2499

GuangZhou

Monday - Friday
9 a.m. - 6 p.m. local time
Phone: +86-20-8755-5561

▶ **India**

Monday - Friday
9 a.m. - 6 p.m. local time
Phone: +91-124-410-7881

▶ **Japan**

Monday - Friday
9:30 a.m. - 5:30 p.m. local time
Phone: +81-3-3523-5991
Email: support.japan@raritan.com

▶ **Europe**

Europe

Monday - Friday
8:30 a.m. - 5 p.m. GMT+1 CET
Phone: +31-10-2844040
Email: tech.europe@raritan.com

United Kingdom

Monday - Friday
8:30 a.m. to 5 p.m. GMT
Phone +44(0)20-7090-1390

France

Monday - Friday
8:30 a.m. - 5 p.m. GMT+1 CET
Phone: +33-1-47-56-20-39

Germany

Monday - Friday
8:30 a.m. - 5:30 p.m. GMT+1 CET
Phone: +49-20-17-47-98-0
Email: rg-support@raritan.com

▶ **Melbourne, Australia**

Monday - Friday
9:00 a.m. - 6 p.m. local time
Phone: +61-3-9866-6887

▶ **Taiwan**

Monday - Friday
9 a.m. - 6 p.m. GMT -5 Standard -4 Daylight
Phone: +886-2-8919-1333
Email: support.apac@raritan.com