

OriginKVM 41

Product Manual



thinklogicaltm
Extend • Distribute • Innovate

Thinklogical LLC
100 Washington Street
Milford, Connecticut 06460 U.S.A.

Telephone: 1-203-647-8700

Fax: 1-203-783-9949

www.thinklogical.com

Copyright Notice

Copyright © 2011. All rights reserved. Printed in the U.S.A.

Thinklogical[™], a subsidiary of Logical Solutions, LLC
100 Washington Street
Milford, Connecticut, U.S.A. 06460
Telephone 1-203-647-8700

All trademarks and service marks are property of their respective owners.

Subject: OriginKVM 41, 4x1 KVM Switch
Revision: Rev C, March 2011

Table of Contents

1. Introduction	3
1.1. Contents	3
1.2. Product Overview	3
2. System Features	4
2.1. General System Features	4
2.2. Technical Specifications	5
2.2. Product Overview	6
2.2.1. Desktop Device	6
2.2.2. Convection Cooled	6
3. Connecting the OriginKVM 41	6
3.1 Front Panel View: LED Indicators	6
3.2 Rear Panel View	7
3.3 Cables	7
3.3.1 3.5mm to 3.5mm Cable, 6 Feet (CBL000006-006FR) – Qty 4	7
3.3.2 USB A-B Cable, 6 Feet (CBL000015-006FR) – Qty 4	7
3.3.3 HDMI to DVI, 2 Meters (CBL000030-002MR) – Qty 4	7
4. Installation	8
5. Regulatory and Safety Compliance	9
5.1 Safety Requirements	9
5.1.1 Symbols Found on Product	9
5.2 Regulatory Compliance	9
5.2.1 North America	9
5.2.2 Australia & New Zealand	9
5.2.3 European Union	9
5.2.3.1 Declaration of Conformity	9
5.2.3.2 Standards with Which Our Products Comply	10
5.2.4 Supplementary Information	10
5.2.5 Product Serial Number	11
6. How to Contact Us	11
6.1 Customer Support	11
6.1.1 Website	11
6.1.2 Email	12
6.1.3 Telephone	12
6.1.4 Fax	12
6.2 Product Support	12
6.2.1 Warranty	12
6.2.2 Our Address	13
Appendix A: OriginKVM 41 Quick Start Guide	14
Appendix B: OriginKVM 41 Serial Port Control Protocol	15

1. Introduction

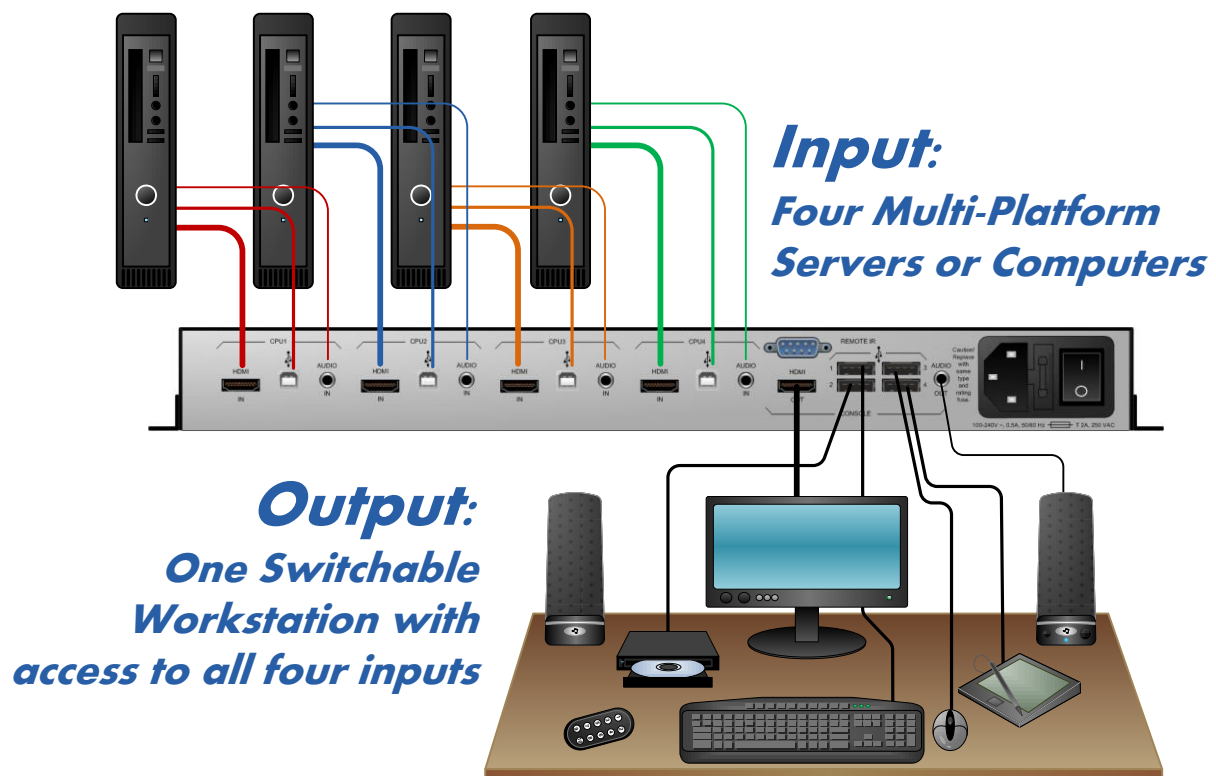
1.1. Contents

When you receive your Thinklogical™ **OriginKVM 41**, you should find the following items:

- OriginKVM 41 Switch – KVM-000041
- AC Power Cord – PWR-000006-R (International connections may differ)
- OriginKVM 41 Cables
- OriginKVM 41 Product Manual

1.2. Product Overview

The Thinklogical™ OriginKVM 41 is a high performance KVM switch that enables one user station to access and switch between four multi-platform servers or computers. The OriginKVM 41 improves operational productivity from the simplest to the most complex requirements and for applications such as hardware/software development, testing labs, network server management and multi-workstation operation.



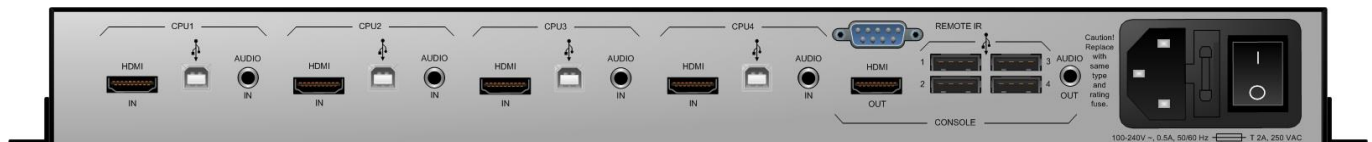
2. System Features

2.1. General System Features

The OriginKVM 41 is a 1-user/4-CPU switch that supports USB 2.0 up to 480 Mbps. The OriginKVM 41 also allows the user to switch the 3.5mm line level audio along with USB 2.0 and DVI/HDMI. In addition, video intensive applications will benefit from OriginKVM 41's DVI and HDMI support.

Each OriginKVM 41 system includes the following features:

- Switches DVI/HDMI, USB, and Line Level Audio
- IR Remote Control (optional)
- Select Switches on the front panel
- 4-port USB hub console
- USB Power, Power from DVI/HDMI and Selected Port CPU LED Indicators
- BIOS level access
- Plug-and-play. No configured required
- Internal universal power supply (Country-specific power cables available upon request)
- Uses standard IEC power cable
- Supports any mix of computers – UNIX, Linux, Windows NT, Windows 2000...
- RS232 Serial Port available for third party controllers*
- Supports HDCP encrypted content.



Rear Panel of the OriginKVM 41 Switch (KVM-000041).

**See Appendix B on pg. 15 for Serial Port Control Protocol*

2.2. Technical Specifications

Storage Temperature	-20 to 70°C (-4 to 158°F), 10 to 90% RH, non-condensing	
Power Supply Voltage	100 to 240 VAC, 50/60 Hz	
Power Consumption	15 Watts, typical	
Heat Dissipation	51 BTUs per hour	
Panel Connectors	Video Ports HDMI (4) USB Keyboard/Mouse USB B (4) Audio Input 3.5mm (4) Serial/IR Receiver RS-232 Male (1) Video for User Display HDMI (1) Keyboard/Mouse & USB 2.0 Devices USB A (4) Audio Output 3.5mm (1)	
	Refer to Section 3.2 for more details on the Rear Panel	
Operating Temperature and Humidity	0 to 50 °C (32 to 122 °F); 5 to 95% RH, non-condensing	
Enclosure Dimensions	Approx. 15.795 x 7.654in x 1.640in high (40.119cm x 19.441cm x 4.166cm high) (Tolerance: ± .039"; .100cm)	
Weight	4 lbs (1.81 kg)	
Shipping Weight	16 lbs (7.26 kg)	
Copper Cables (supplied with unit)	(4) 3.5mm Male to 3.5mm Male Plug, 6FT Thinklogical Part Number: CBL000016-006FR (4) USB Type A to USB Type B Cable, 6 Feet Thinklogical Part Number: CBL000015-006FR (4) HDMI Male to DVI Male Cable, 2 Meters Thinklogical Part Number: CBL000030-002MR	
Compliance	Approvals for US, Canada, and European Union	
Warranty	12 months from date of shipment Extended warranties available	

2.2. Product Overview

2.2.1. Desktop Device

You may choose to place the chassis on a shelf or desktop (rubber feet included). The front panel should be visible and front panel buttons should be accessible. All connections are made to the rear of the chassis. The OriginKVM 41 chassis does not need to be opened or accessed. The sturdy metal case allows units to be stacked, as required.



NOTE: Be sure to leave adequate ventilation space on both sides of the units (2" minimum), especially if units are being stacked.

2.2.2. Convection Cooled

The OriginKVM 41 does not require special cooling or ventilation. No fans means that it will not add to the ambient noise in your equipment room and it is less prone to equipment failure. Be sure not to block the air vents on the sides of the unit. Leave a minimum of 2" clearance on both sides.

3. Connecting the OriginKVM 41

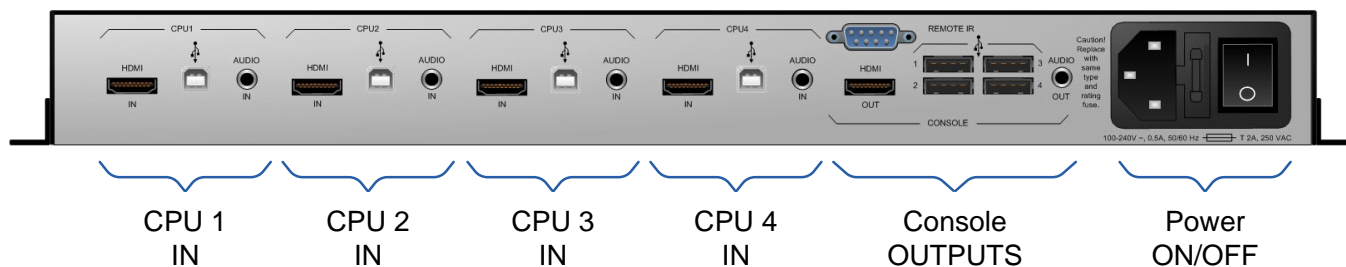
All physical connections to the product use industry-standard connectors. All connections are found on the rear panel of the unit.

3.1 Front Panel View: LED Indicators



Power	LED on (green) LED off	Power is connected and supplied to OriginKVM 41. Power is not connected and/or not supplied to OriginKVM 41.
Console		
1	LED on (green) LED off	Port 1 of the USB hub is powered and operational. Port 1 of the USB hub is not functional.
2	LED on (green) LED off	Port 2 of the USB hub is powered and operational. Port 2 of the USB hub is not functional.
3	LED on (green) LED off	Port 3 of the USB hub is powered and operational. Port 3 of the USB hub is not functional.
4	LED on (green) LED off	Port 4 of the USB hub is powered and operational. Port 4 of the USB hub is not functional.
CPU 1-4		
SEL	LED on (green)	Channel is selected.
USB	LED on (green)	USB is connected properly and power is supplied.
HDMI	LED on (green)	HDMI is connected properly and power is supplied.
IR		
ACT	LED on (green)	IR Receiver is communicating/receiving data from the remote.

3.2 Rear Panel View



3.3 Cables

3.3.1 3.5mm to 3.5mm Cable, 6 Feet (CBL000006-006FR) – Qty 4



3.3.2 USB A-B Cable, 6 Feet (CBL000015-006FR) – Qty 4

USB B

USB A



3.3.3 HDMI to DVI, 2 Meters (CBL000030-002MR) – Qty 4

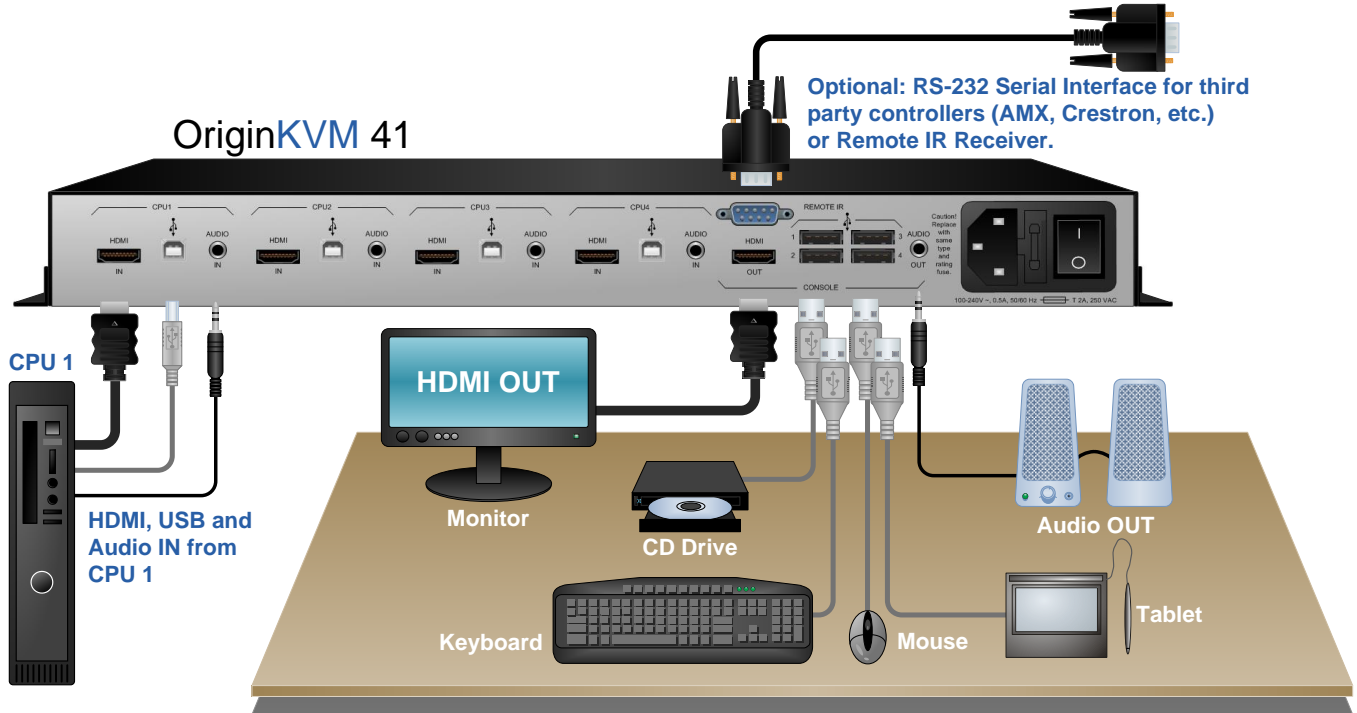
DVI Male

HDMI Male



4. Installation

(Also see the Quick Start Guide in the **Appendix A** on page 14.)



CPU 1 through 4 Port Connections:

1. Connect the included DVI to HDMI cable (CBL000030-002MR) from the CPU 1 DVI Video Card to the OriginKVM 41's HDMI IN from CPU 1 Port.
2. Connect the included USB A to USB B cable (CBL000015-006FR) from the CPU 1 USB Keyboard/Mouse Port to the OriginKVM 41's USB B IN from CPU 1 Port.
3. Connect the included 3.5mm to 3.5mm cable (CBL000016-006FR) from the CPU 1 Audio Output to the OriginKVM 41's 3.5mm Audio IN from CPU 1 Port.
4. Repeat Steps 1-3 for CPUs 2 through 4.

Console Connections:

1. Connect an AC Power Cord to the OriginKVM 41 and turn the unit ON
2. Plug the DVI Display into the HDMI port labeled HDMI OUT.
3. Connect up to (4) USB HID devices (such as keyboard and mouse, CD Drive, etc.) into the USB A connectors labeled 1 through 4.
4. Connect your speakers or other audio output device into the 3.5mm port labeled AUDIO OUT.
5. **Optional:** Connect a Serial Interface for third party controllers (AMX, Crestron, etc.) or Remote IR Receiver (up to 100') to the RS-232 port. (See Appendix B, Pg. 15)

Ensure that all system functions are operating properly.

5. Regulatory and Safety Compliance

5.1 Safety Requirements

5.1.1 Symbols Found on Product

Markings and labels on the product follow industry-standard conventions. Regulatory markings found on the products comply with standard requirements.

5.2 Regulatory Compliance

Thinklogical™ LLC products are designed and made in the USA. Our products have been tested by a nationally recognized testing laboratory and found to be compliant with the following standards (both domestic USA and many international locations).

5.2.1 North America

These products comply with the following standards:

Safety

- ANSI/UL60950-1: 1st Edition (2003)
- CAN/CSA C22.2 No. 60950-1-03

Electromagnetic Interference

- FCC CFR47, Part 15, Class A
- Industry Canada ICES-003 Issue 2, Revision 1

5.2.2 Australia & New Zealand

This is a Class A product. In a domestic environment this product may cause radio interference, in which case the user may be required to take corrective measures.

5.2.3 European Union

5.2.3.1 Declaration of Conformity

Manufacturers name and address:

Thinklogical™, a subsidiary of Logical Solutions, LLC.
100 Washington Street
Milford, CT 06460 USA
Telephone: 1-203-647-8700

Product name: **OriginKVM 41**

This product complies with the requirements of the Low Voltage Directive 72/23/EEC and the EMC Directive 89/336/EEC.

5.2.3.2 Standards with Which Our Products Comply

Safety

- CENELEC EN 60950-1, 1st Edition (2001)

Electromagnetic Emissions

- EN55022: 1994 (IEC/CSPR22:1993)
- EN61000-3-2/A14:2000
- EN61000-3-3:1994

Electromagnetic Immunity

- EN55024:1998 Information Technology Equipment-Immunity Characteristics
- EN61000-4-2:1995 Electro-Static Discharge Test
- EN61000-4-3:1996 Radiated Immunity Field Test
- EN61000-4-4:1995 Electrical Fast Transient Test
- EN61000-4-5:1995 Power Supply Surge Test
- EN61000-4-6:1996 Conducted Immunity Test
- EN61000-4-8:1993 Magnetic Field Test
- EN61000-4-11:1994 Voltage Dips & Interrupts Test

5.2.4 Supplementary Information

The following statements may be appropriate for certain geographical regions and might not apply to your location.



NOTE: 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 when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user may be required to correct the interference to radio communications.



NOTE: This Class A digital apparatus complies with Canadian ICES-003 and has been verified as being compliant within the Class A limits of the FCC Radio Frequency Device Rules (FCC Title 47, Part 15, Subpart B Class A), measured to CISPR 22: 1993 limits and methods of measurement of Radio Disturbance Characteristics of Information Technology Equipment.

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.



WARNING: This is a Class A product. In a domestic environment this product may cause radio interference, in which case the user may be required to take corrective measures.



NOTE: Users may notice degraded audio performance in the presence of electromagnetic fields.

5.2.5 Product Serial Number

Thinklogical™ products have a unique serial number, imprinted on a small silver label that is placed on the bottom of the chassis. The serial number includes a date-code. The format for the date-code is two digits for the month; two digits for the day, two digits for the year and two or three digits for a unique unit number. This serial number is also found on the original shipping carton.

6. How to Contact Us

6.1 Customer Support

Thinklogical™ is an engineering company and we believe that the first line of support is the design engineer that developed each product. Therefore your questions will be handled promptly by our most knowledgeable engineers.

Thank you for choosing Thinklogical™ products for your application.

We appreciate your business and are dedicated to helping you successfully use our products.

thinklogical™ is always here to help you.

To contact us, please use the following telephone numbers and internet-based methods:

6.1.1 Website

Check out our website for current product offerings, support information and general information about all of the products we offer.

Our internet website offers product information on all current systems, including technical specification sheets and installation guides (for viewing online or for download), product diagrams showing physical connections and other information you might need: www.thinklogical.com



NOTE: Most online documents are stored as Adobe Acrobat “PDF” files. If you do not have the Adobe Acrobat reader needed to view PDF files, visit www.adobe.com for a download.

6.1.2 Email

Thinklogical™ is staffed Monday through Friday from 8:30am to 5:00pm, Eastern Time Zone. We will make every effort to respond to your email inquiries promptly. Please use one of the following email addresses for your particular needs:

info@thinklogical.com – Information about Thinklogical™ and our products.

sales@thinklogical.com – Sales Department - orders, questions or issues.

support@thinklogical.com – Product support, technical issues or questions, product repairs and request for Return Authorization.

6.1.3 Telephone

Telephone Sales: Please contact our expert, technically oriented sales staff via telephone in Milford, CT at **1-203-647-8700** or if in the continental US, you may use our **toll-free number 1-800-291-3211**. We are here Monday through Friday from 8:30am to 5:00pm, Eastern Time Zone. Ask for a direct dial phone number when you call.

Telephone Product Support: Contact Product Support via telephone in Milford, CT at **1-203-647-8700**. The support lines are manned Monday through Friday, 8:30am to 5pm, Eastern Time Zone.

International Sales: Please contact our US sales staff in Milford, CT at **1-203-647-8700**. We are here Monday through Friday, 8:30am to 5:00pm, Eastern Time Zone (same as New York City). If leaving a voice message, please let us know the best time to call you back so we may reach you at your convenience.

Our switchboard attendant will direct your call during regular business hours. We have an automated attendant answering our main telephone switchboard after regular business hours and on holidays, so you can leave a voice message at any time. Our Sales Representatives have direct numbers to better serve you.

6.1.4 Fax

Our company facsimile number is **1-203-783-9949**. Please indicate the nature of the fax on your cover sheet and provide return contact information.

6.2 Product Support

Thinklogical's support personnel are available Monday through Friday from 8:30am to 5:00pm, Eastern Time Zone. If your application might require assistance at some time outside of our normal business hours, please contact us beforehand and we will do our best to make arrangements to help you with your Thinklogical products.

6.2.1 Warranty

Thinklogical™ LLC ("Thinklogical") warrants this product against defects in materials and workmanship for a period of one (1) year from the date of delivery (ordinary wear and tear excluded). This limited warranty does not cover defects resulting from (i) use of the product other than as described in the applicable documentation for the product; (ii) modifications to or repairs of the product that are made by any party other than Thinklogical or a party acting on Thinklogical's behalf, or (iii) combination of the product with third party products that is not consented to by Thinklogical. Occurrences of events

described in (i) – (iii) shall void the foregoing warranty. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Except for the express warranty set forth above, to the fullest extent permitted under applicable law, Thinklogical™ LLC and its suppliers disclaim any and all other warranties, express and implied, including without limitation the implied warranties of merchantability, fitness for a particular purpose, title and non-infringement.

If the defective product is returned to the authorized dealer within one (1) year of the delivery date, repair or replacement of the product will be made. Repairs may be made with refurbished parts. If repair or replacement is not possible, Thinklogical may keep the defective product and refund the amount that you paid for the defective product. These are Thinklogical's sole obligations, and your exclusive remedies, for a breach of the limited warranty set forth above.

To return a defective product, contact the Thinklogical authorized dealer from whom you purchased the product. Do not return a product directly to Thinklogical without prior authorization from your dealer.

If you have received prior authorization from your dealer and are returning a product directly to Thinklogical:

1. Contact a sales representative or call Customer Support at 1-800-291-3211 or 1-203-647-8700.
2. Describe the defect and Customer Support will issue a Return Merchandise Authorization Number (RMA#).
3. Pack the product in its original packing, if possible, and write the RMA number on the box.
4. Return the product to:
Thinklogical, LLC
Attn: RMA# [Insert the RMA# issued to you, by Thinklogical, here.]
100 Washington Street
Milford, CT 06460 USA

6.2.2 Our Address

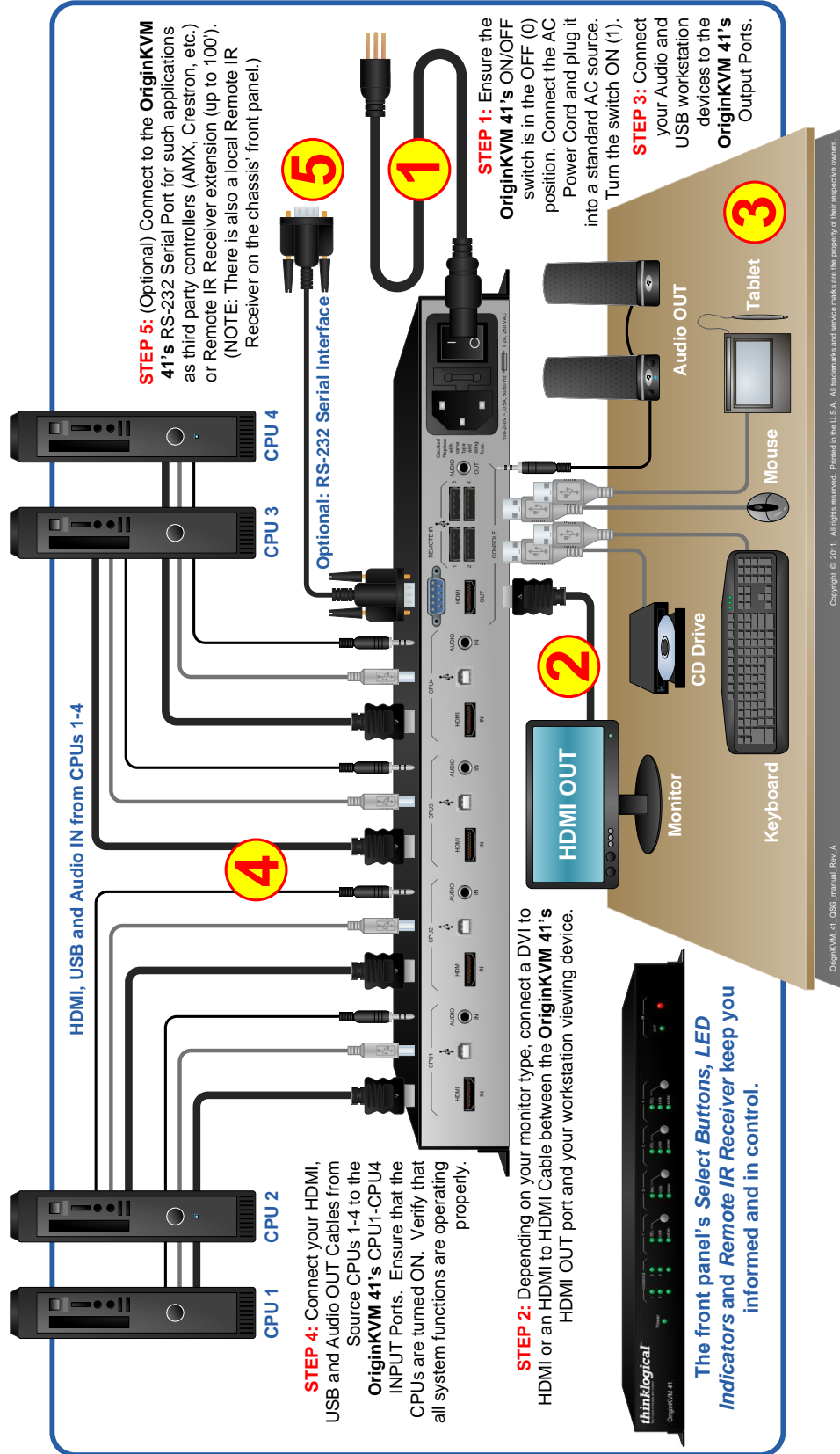
If you have any issue with the product, have product questions or need technical assistance with your Thinklogical™ system, please call us at **1-800-291-3211 (USA only)** or **1-203-647-8700** and let us help. If you'd like to write us, we are located at:

**Thinklogical™ LLC
100 Washington Street
Milford, Connecticut, USA 06460**

Thinklogical™ LLC products carry a one year warranty, with longer terms available at time of purchase on most products. Please refer to your product invoice for your products Warranty Terms & Conditions.

Appendix A: OriginKVM 41 Quick Start Guide

QUICK-START GUIDE OriginKVM 41 High Performance KVM Switch



Appendix B: OriginKVM 41 Serial Port Control Protocol

OriginKVM 41 Serial Port Control Protocol

The **OriginKVM 41** is wired as DTE and has a DB9-M connector.

Byte seq. #	0	1	2	3	4	5
ASCII string:	\$	0	x	N	CR	LF

Where **x** = 1 to 4, **CR** = 0x0d, **LF** = 0x0a

The baud rate is 9600, 8 data bits, 1 stop bit, no parity, no flow control.

	<u>PC</u>	<u>OriginKVM 41</u>
Pins:	2	3
	3	2
	5	5