



**2/4-Port USB KVM Switch  
CS72U / CS74U**

**User Manual**



## FCC Information

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**FEDERAL COMMUNICATIONS COMMISSION INTERFERENCE STATEMENT:** This equipment has been tested and found to comply with the limits for a Class B digital service, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. Any changes or modifications made to this equipment may void the user's authority to operate this equipment. This equipment generates, uses, and can radiate radio frequency energy. If not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- ◆ Reorient or relocate the receiving antenna.
- ◆ Increase the separation between the equipment and receiver.
- ◆ Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- ◆ Consult the dealer or an experienced radio/TV technician for help.

**FCC Caution:** Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

### KCC Statement

유선 제품용 / B 급 기기 ( 가정용 방송 통신 기기 )

이 기기는 가정용 ( B 급 ) 전자파적합기기로서 주로 가정에서 사용하는 것을 목적으로 하며 , 모든 지역에서 사용할 수 있습니다 .



# RoHS

This product is RoHS compliant.

## KVM+ 多電腦切換器類產品

設備名稱 Equipment Name	2埠 VGA/USB KVM 多電腦切換器 / 4埠 VGA USB KVM 多電腦切換器			型號 ( 型式 ) Type designation (Type)	CS72U / CS74U	
單元 Unit	限用物質及其化學符號 Restricted substances and its chemical symbols					
	鉛 Lead (Pb)	汞 Mercury (Hg)	鎘 Cadmium (Cd)	六價鉻 Hexavalent chromium (Cr <sup>+6</sup> )	多溴聯苯 Polybrominated biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)
電纜線 Cable	—	○	○	○	○	○
印刷電路部 件 PCBA	—	○	○	○	○	○
塑膠 / 其他部 件 Plastic / Other parts	○	○	○	○	○	○
金屬部件 Metal parts	—	○	○	○	○	○

備考 1. “超出 0.1 wt %” 及 “超出 0.01 wt %” 係指限用物質之百分比含量超出百分比含量基準值。

Note 1: “Exceeding 0.1 wt %” and “exceeding 0.01 wt %” indicate that the percentage content of the restricted substance exceeds the reference percentage value of presence condition.

備考 2. “○” 係指該項限用物質之百分比含量未超出百分比含量基準值。

Note 2: “○” indicates that the percentage content of the restricted substance does not exceed the percentage of reference value of presence.

備考 3. “—” 係指該項限用物質為排除項目。

Note 3: “—” indicates that the restricted substance corresponds to the exemption.

**製造商：**宏正自動科技股份有限公司

**地址：**新北市汐止區大同路二段 125 號三樓

**警告使用者：**此為甲類資訊技術設備，於居住環境中使用時，可能會造成射頻擾動，在此種情況下，使用者會被要求採取某些適當的對策。



## User Information

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### Online Registration

Be sure to register your product at our online support center:

International	<a href="http://support.aten.com">http://support.aten.com</a>
North America	<a href="http://www.aten-usa.com/product_registration">http://www.aten-usa.com/product_registration</a>

### Telephone Support

For telephone support, call this number:

International	886-2-8692-6959
China	86-400-810-0-810
Japan	81-3-5615-5811
Korea	82-2-467-6789
North America	1-888-999-ATEN ext 4988 1-949-428-1111

### User Notice

All information, documentation, and specifications contained in this manual are subject to change without prior notification by the manufacturer. The manufacturer makes no representations or warranties, either expressed or implied, with respect to the contents hereof and specifically disclaims any warranties as to merchantability or fitness for any particular purpose. Any of the manufacturer's software described in this manual is sold or licensed *as is*. Should the programs prove defective following their purchase, the buyer (and not the manufacturer, its distributor, or its dealer), assumes the entire cost of all necessary servicing, repair and any incidental or consequential damages resulting from any defect in the software.

The manufacturer of this system is not responsible for any radio and/or TV interference caused by unauthorized modifications to this device. It is the responsibility of the user to correct such interference.

The manufacturer is not responsible for any damage incurred in the operation of this system if the correct operational voltage setting was not selected prior to operation. PLEASE VERIFY THAT THE VOLTAGE SETTING IS CORRECT BEFORE USE.

## Package Contents

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The CS72U / CS74U package consists of:

- ◆ 1 CS72U / CS74U 2/4-Port USB KVM Switch
- ◆ 2 Custom KVM Cable sets (CS72U)
- ◆ 4 Custom KVM Cable sets (CS74U)
- ◆ 1 User Guide

Check to make sure that all the components are present and that nothing got damaged in shipping. If you encounter a problem, contact your dealer.

Read this manual thoroughly and follow the installation and operation procedures carefully to prevent any damage to the unit, and/or any of the devices connected to it.

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\* Features may have been added to the CS72U / CS74U since this manual was published. Please visit our website to download the most up-to-date version of the manual.

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## About this Manual

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This User Manual is provided to help you get the most from your CS72U / CS74U. It covers all aspects of installation, configuration and operation. An overview of the information found in the manual is provided below.

**Chapter 1, Introduction**, introduces you to the CS72U / CS74U system. Its purpose, features and benefits are presented, and its front and back panel components are described.

**Chapter 2, Hardware Setup**, describes how to set up your installation. The necessary steps are provided.

**Chapter 3, Basic Operation**, explains the fundamental concepts involved in operating the CS72U / CS74U.


**An Appendix**, provides specifications and other technical information regarding the CS72U / CS74U.



## Conventions

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This manual uses the following conventions:

- Monospaced      Indicates text that you should key in.
- [ ]                Indicates keys you should press. For example, [Enter] means to press the **Enter** key. If keys need to be chorded, they appear together in the same bracket with a plus sign between them: [Ctrl+Alt].
- 1.                 Numbered lists represent procedures with sequential steps.
- ◆                 Bullet lists provide information, but do not involve sequential steps.
- Indicates selecting the option (on a menu or dialog box, for example), that comes next. For example, Start → Run means to open the *Start* menu, and then select *Run*.
-                 Indicates critical information.

## Product Information

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For information about all ATEN products and how they can help you connect without limits, visit ATEN on the Web or contact an ATEN Authorized Reseller. Visit ATEN on the Web for a list of locations and telephone numbers:

International	<a href="http://www.aten.com">http://www.aten.com</a>
North America	<a href="http://www.aten-usa.com">http://www.aten-usa.com</a>

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# Chapter 1

## Introduction

### Overview

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The CS72U / CS74U 2/4-Port USB KVM Switch is a desktop control unit that allows users to access two or four computers from a single KVM and VGA console (keyboard and mouse, audio and VGA monitor).

With the CS72U / CS74U, you can access computers conveniently using port selection pushbuttons located on the unit's front panel.

Setup is fast and easy; simply plug cables into their appropriate ports. There is no software to configure, no installation routines, and no incompatibility problems. Since the CS72U / CS74U intercepts keyboard input directly, it will work on multiple computing platforms.

There is no better way to save time and money than with a CS72U / CS74U installation. Since a single console manages all of the computers, the CS72U / CS74U setup: eliminates the expense of having to purchase separate console components for each computer; saves all the space those extra components would take up; saves on energy costs; and eliminates the inconvenience and wasted effort involved in constantly moving from one computer to another.

### Features

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- ◆ One VGA console controls two (CS72U) or four (CS74U) USB VGA interface computers
- ◆ Computer selection via front panel pushbuttons
- ◆ Multiplatform support – Windows 2000/XP/Vista/7, Linux, Mac, and Sun\*
- ◆ Superior video quality – 2048 x 1536; DDC2B
- ◆ Supports USB hot-plugging
- ◆ Non-powered

## Hardware Requirements

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### Console

- ◆ A VGA compatible monitor capable of the highest possible resolution
- ◆ A USB mouse
- ◆ A USB keyboard
- ◆ Microphone and Speakers (optional)

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**Note:** Use a keyboard that supports your operating system (OS). For example: use a Mac keyboard when you are working on a Mac OS, and use Sun keyboard when you are working on a Sun OS.

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### Computers

- ◆ A VGA port

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**Note:** The quality of the display is affected by the quality of the VGA display card. For best results, we recommend you purchase a high quality product.

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- ◆ Audio ports (optional)
- ◆ Type A USB ports

### Cables

Only KVM cable sets which are specifically designed to work with this switch may be used to link to the computers. Two (CS72U) or four (CS74U) cable sets are provided with this package. To order further cable sets, please see table, below:

Connectors	Length	Part Number
USB	1.2 m	LIN5-23X5-X31G (1.2M)
USB	1.8 m	LIN5-23X5-X32G (1.8M)

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**Note:** The quality of the display is affected by the quality and length of the cables. Please use the cables provided in the package to have the best quality. If you need additional cable sets, please contact your dealer to purchase the appropriate ones for your switch.

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## Operating Systems

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Supported operating systems are shown in the table, below:

OS		Version
Windows		2000 / XP / 2003 / 2008 / Vista / 7
Linux	RedHat	9.0 and higher
	SuSE	10 / 11.1 and higher
	Debian	3.1 / 4.0
	Ubuntu	7.04 / 7.10
UNIX	AIX	4.3 and higher
	FreeBSD	5.5 and higher
	Sun	Solaris 8 and higher
Novell	Netware	6.0 and higher
Mac		OS 9 to 10.6

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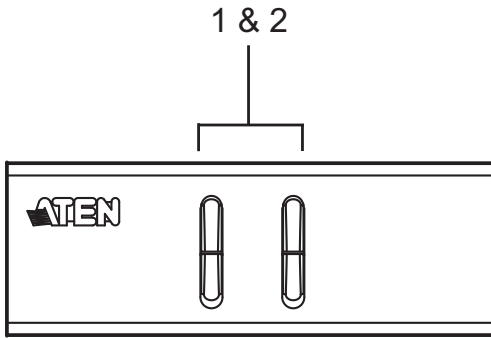
**Note:** Supports Linux Kernel 2.6 and higher.

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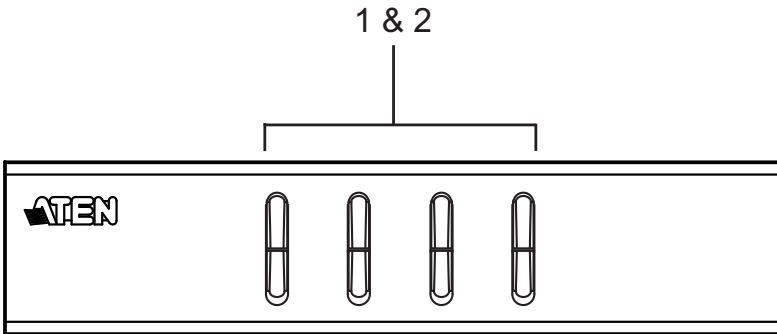
## Components

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### CS72U Front View



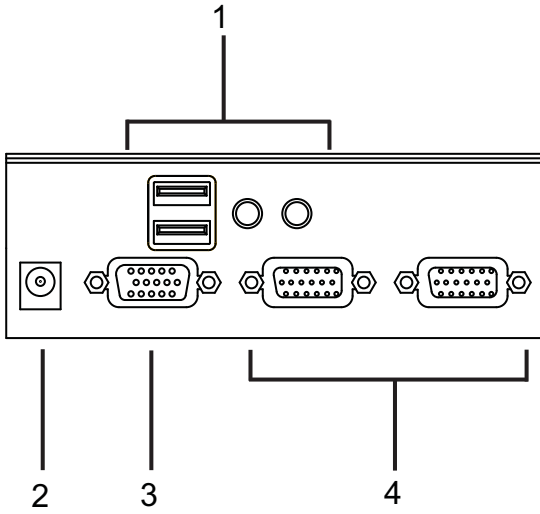
### CS74U Front View



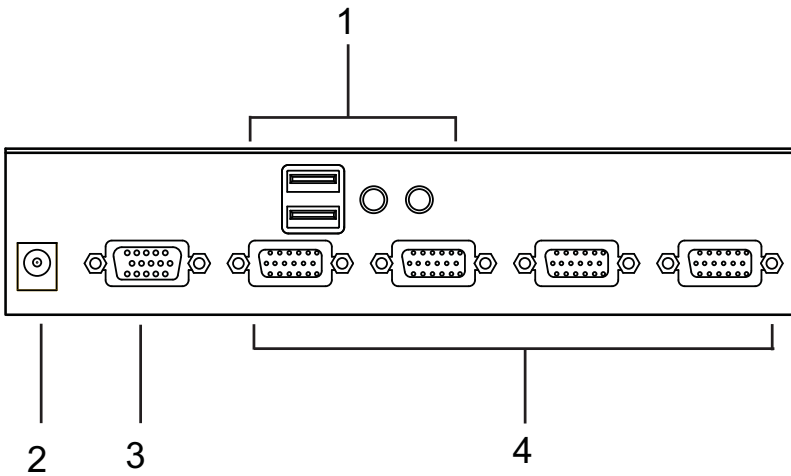
No.	Component	Description
1	Port Selection Pushbuttons	For manual port selection: <ul style="list-style-type: none"><li>◆ Press and release a port selection pushbutton to bring the KVM focus to the computer attached to its corresponding port. The Port LED lights green.</li></ul>
2	Port LEDs	The Port LEDs are built into the Port Selection Switches. <b>KVM</b> <ul style="list-style-type: none"><li>◆ Lights DIM ORANGE to indicate that the computer attached to the corresponding port is up and running (On Line).</li><li>◆ Changes to green to indicate that the computer attached to its corresponding port is the one that has the KVM focus (Selected).</li></ul>

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## **CS72U Rear View**



## **CS74U Rear View**





No.	Component	Description
1	Console Keyboard and Mouse Ports	The cables from your USB console keyboard and USB console mouse plug in here. Each connector is marked with an appropriate icon to indicate itself.
2	Power Jack	If you choose to use external power, the power adapter cable plugs into this jack.
3	Console Monitor Port	The cable from your VGA console monitor plugs into this port.
4	KVM Port Section	The custom KVM cable sets that link the CS72U / CS74U to your computers plug in here. Each KVM port section is comprised of a single female SPHD-18 port, which incorporates both the USB and VGA connection.

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- Note:** 1. Use of a power adapter (DV 5V) is optional, and requires a separate purchase.
2. The shape of the connectors has been specifically modified so that only custom KVM cables designed to work with this switch can plug in (see *Cables*, page 2, for details). Do NOT attempt to use ordinary 15-pin VGA connector cables to link these ports to the computer.
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## Chapter 2

# Hardware Setup



1. Important safety information regarding the placement of this device is provided on page 13. Please review it before proceeding.
2. Make sure that power to all the devices you will be installing has been turned off. You must unplug the power cords of any computers that have the Keyboard Power On function.

### Cable Connections

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To set up your CS72U / CS74U installation, refer to the installation diagram on the following page (the numbers in the diagrams correspond to the steps, below), and do the following:

1. Plug your keyboard and mouse into the USB console ports located on the unit's rear panel.
2. Plug your console monitor into the VGA console port located in the unit's rear panel and power on the monitor.
3. Using the custom KVM cable set (provided with this package), plug the custom SPHD connector into any available socket in the KVM port section of the switch
4. At the other end of the cable, plug the USB and VGA connectors into their respective ports on the computer.
5. If you choose to use external power, plug the power adapter into an AC power source, then plug power adapter cable into the switch's Power Jack.

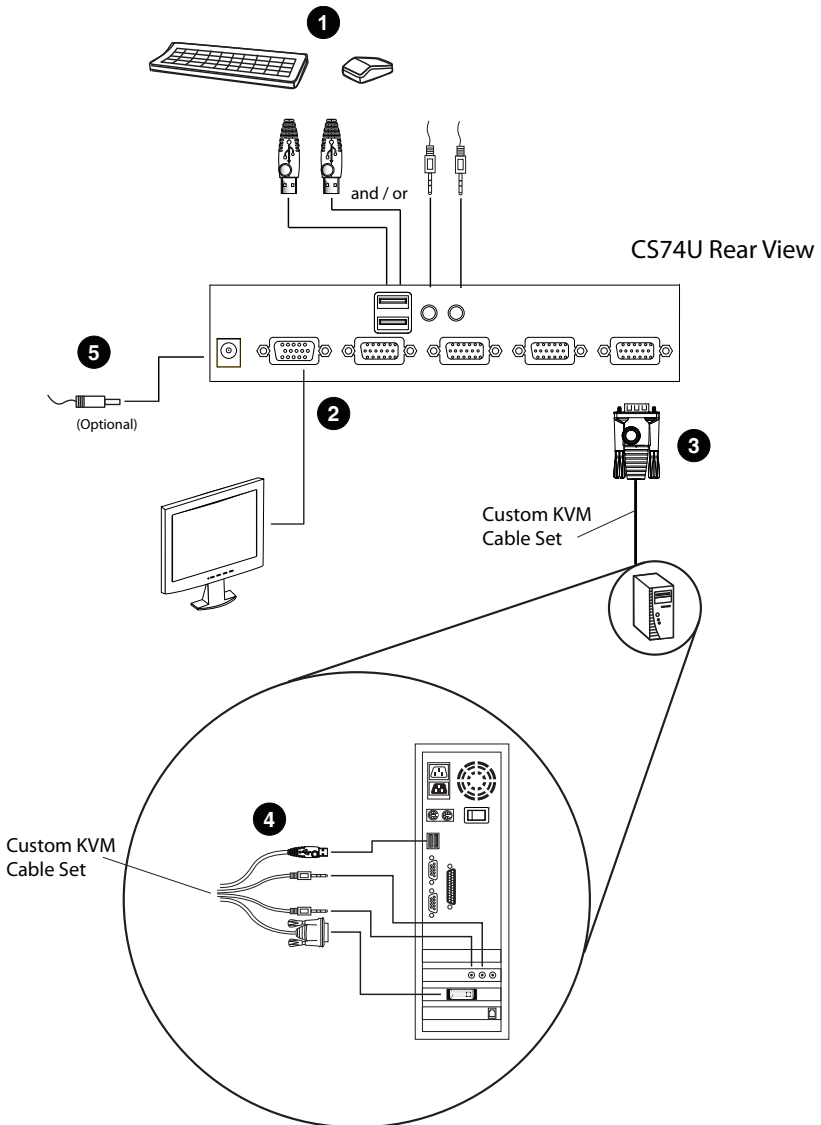
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**Note:** The power adapter should be DC 5V (positive inside / negative outside)

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6. Turn on the power to the computers.

## Installation Diagram



# Chapter 3

## Basic Operation

### Overview

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The CS72U / CS74U features a convenient method to access the computers through Manual switching – which involves pressing the port selection pushbuttons located on the unit's front panel.

### Manual Switching

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For manual port selection:

- ◆ Press and release a port selection pushbutton to bring the KVM focus to the computer attached to its corresponding port. The Port LED lights green.

### Powering Off and Restarting

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If it becomes necessary to power off the CS72U / CS74U unit, before starting it back up you must do the following:

1. Shut down all the computers that are attached to the switch.
2. Unplug the external power adapter cable if it exists.
3. Wait 10 seconds, then plug the switch's power adapter cable back in.
4. After the switch is up, power on the computers.

### Port ID Numbering

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Each KVM port section on the CS72U / CS74U switch is assigned a port number. (1 or 2 for the CS72U; 1 to 4 for the CS74U). The port numbers are marked on the rear panel of the switch (see page 6 for details).

The Port ID of a computer is derived from the KVM port number it is connected to. For example, a computer connected to KVM port 2 has a Port ID of 2.

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## Safety Instructions

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- ◆ Read all of these instructions. Save them for future reference.
- ◆ Follow all warnings and instructions marked on the device.
- ◆ Do not place the device on any unstable surface (cart, stand, table, etc.). If the device falls, serious damage will result.
- ◆ Do not use the device near water.
- ◆ Do not place the device near, or over, radiators or heat registers.
- ◆ The device cabinet is provided with slots and openings to allow for adequate ventilation. To ensure reliable operation, and to protect against overheating, these openings must never be blocked or covered.
- ◆ The device should never be placed on a soft surface (bed, sofa, rug, etc.) as this will block its ventilation openings. Likewise, the device should not be placed in a built in enclosure unless adequate ventilation has been provided.
- ◆ Never spill liquid of any kind on the device.
- ◆ Unplug the device from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.
- ◆ The device should be operated from the type of power source indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.
- ◆ The device is designed for IT power distribution systems with 230V phase-to-phase voltage.
- ◆ To prevent damage to your installation, it is important that all devices are properly grounded.
- ◆ The device is equipped with a 3-wire grounding type plug. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not attempt to defeat the purpose of the grounding-type plug. Always follow your local/national wiring codes.
- ◆ Do not allow anything to rest on the power cord or cables. Route the power cord and cables so that they cannot be stepped on or tripped over.

- ◆ If an extension cord is used with this device make sure that the total of the ampere ratings of all products used on this cord does not exceed the extension cord ampere rating. Make sure that the total of all products plugged into the wall outlet does not exceed 15 amperes.
- ◆ To help protect your system from sudden, transient increases and decreases in electrical power, use a surge suppressor, line conditioner, or un-interruptible power supply (UPS).
- ◆ Position system cables and power cables carefully; Be sure that nothing rests on any cables.
- ◆ Never push objects of any kind into or through cabinet slots. They may touch dangerous voltage points or short out parts resulting in a risk of fire or electrical shock.
- ◆ Do not attempt to service the device yourself. Refer all servicing to qualified service personnel.
- ◆ If the following conditions occur, unplug the device from the wall outlet and bring it to qualified service personnel for repair.
  - ◆ The power cord or plug has become damaged or frayed.
  - ◆ Liquid has been spilled into the device.
  - ◆ The device has been exposed to rain or water.
  - ◆ The device has been dropped, or the cabinet has been damaged.
  - ◆ The device exhibits a distinct change in performance, indicating a need for service.
  - ◆ The device does not operate normally when the operating instructions are followed.
- ◆ Only adjust those controls that are covered in the operating instructions. Improper adjustment of other controls may result in damage that will require extensive work by a qualified technician to repair.



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## Technical Support

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### International

- ◆ For online technical support – including troubleshooting, documentation, and software updates: **<http://support.aten.com>**
- ◆ For telephone support, *Telephone Support*, page iv

### North America

Email Support		<a href="mailto:support@aten-usa.com">support@aten-usa.com</a>
Online Technical Support	Troubleshooting Documentation Software Updates	<a href="http://www.aten-usa.com/support">http://www.aten-usa.com/support</a>
Telephone Support		1-888-999-ATEN ext 4988 1-949-428-1111

When you contact us, please have the following information ready beforehand:

- ◆ Product model number, serial number, and date of purchase.
- ◆ Your computer configuration, including operating system, revision level, expansion cards, and software.
- ◆ Any error messages displayed at the time the error occurred.
- ◆ The sequence of operations that led up to the error.
- ◆ Any other information you feel may be of help.

## Specifications

Function		CS72U	CS74U
Computer Connections		2	4
Port Selection		Front Panel Pushbuttons	
Connectors	Console Ports	Keyboard	1 x USB Type A Female (Black)
		Video	1 x HDB-15 Female (Blue)
		Mouse	1 x USB Type A Female (Black)
		Microphone	1 x mini stereo Jack Female (Pink)
		Speaker	1 x mini stereo Jack Female (Green)
	KVM Ports	2 x SPHD-18 Female (Yellow)	4 x SPHD-18 Female (Yellow)
Power		1 x DC Jack (Spare)	
LEDs	On Line	2 (Orange)	4 (Orange)
	Selected	2 (Green)	4 (Green)
Button	Selected	2 x Pushbuttons	4 x Pushbuttons
Video		2048 x 1536 @ 60 Hz; DDC2B	
Power Consumption		DC5V, 0.5W	
Environment	Operating Temp.	0–50°C	
	Storage Temp.	-20–60°C	
	Humidity	0–80% RH, Non-condensing	
Physical Properties	Housing	Metal	
	Weight	0.45 kg	0.64 kg
	Dimensions (L x W x H)	13.00 x 7.45 x 4.20 cm	20.00 x 7.45 x 4.20 cm

**Note:** Do not connect a KVM Extender to the KVM Switch to extend the distance as doing this deteriorates the video quality.

## Troubleshooting

Operation problems can be due to a variety of causes. The first step in solving them is to make sure that all cables are securely attached and seated completely in their sockets. In addition, updating the product's firmware may solve problems that have been discovered and resolved since the prior version was released. If your product is not running the latest firmware version, we strongly recommend that you upgrade. See Chapter 6, **The Firmware Upgrade Utility**, for details.

Symptom	Possible Cause	Action
Erratic behavior.	Unit not receiving enough power.	Use a DC 5V power adapter if you are not already using one. If you are already using a power adapter, check that it matches the system specifications, and that it is plugged in and functioning properly.
	Keyboard and/or mouse need to be reset.	Unplug the cable(s) from the console port(s), then plug it/them back in.
	No connection to the computer.	Check the cable from the switch to the computer to make sure it is properly connected.
	KVM switch needs to be reset.	Power off all devices on the installation; power off the KVM switch; wait five seconds; then power up.
USB devices not responding.	USB ports need to be reset.	Unplug the device's USB cable from the USB port on the switch's rear panel, then plug it back in.

## About SPHD Connectors



This product uses SPHD connectors for its KVM and/or Console ports. We have specifically modified the shape of these connectors so that only KVM cables that we have designed to work with this product can be connected.

## Limited Warranty

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ATEN warrants its hardware in the country of purchase against flaws in materials and workmanship for a Warranty Period of two [2] years (warranty period may vary in certain regions/countries) commencing on the date of original purchase. This warranty period includes the LCD panel of ATEN LCD KVM switches. Select products are warranted for an additional year (see *A+ Warranty* for further details). Cables and accessories are not covered by the Standard Warranty.

### **What is covered by the Limited Hardware Warranty**

ATEN will provide a repair service, without charge, during the Warranty Period. If a product is defective, ATEN will, at its discretion, have the option to (1) repair said product with new or repaired components, or (2) replace the entire product with an identical product or with a similar product which fulfills the same function as the defective product. Replaced products assume the warranty of the original product for the remaining period or a period of 90 days, whichever is longer. When the products or components are replaced, the replacing articles shall become customer property and the replaced articles shall become the property of ATEN.

To learn more about our warranty policies, please visit our website:

<http://www.aten.com/global/en/legal/policies/warranty-policy/>