

# MASTER VIEW USB KVM SWITCH



## USER MANUAL

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# ACS-1722 ACS-1724

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Read this guide thoroughly and follow the installation and operation procedures carefully in order to prevent any damage to the units and/or any devices that connect to them.

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This package contains:

- 1 ACS-1722 or ACS-1724 KVM Switch
- 2 (ACS-1722) or 4 (ACS-1724) Custom Cable Sets
- 1 Power Adapter
- 1 User Manual

If anything is damaged or missing, contact your dealer.

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**Note:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instruction manual, may cause 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 which the receiver is connected;
- ◆ Consult the dealer or an experienced radio/television technician for help.

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## OVERVIEW

The ACS-1722 and the ACS-1724 represent a revolutionary new direction in KVM (Keyboard, Video, Mouse) Switches: a dual function two and or four Port KVM Switch / 2 Port USB 2.0 Hub combination.

As KVM switches, users can access two (ACS-1722) or up to four (ACS-1724) computers from a single PS/2 keyboard, mouse, and monitor using USB 2.0 technology to handle the data connection between the KVM switch and the connected computers. At the same time, they allow the computers (PCs and Macs) to access two additional USB 2.0 peripheral devices on a 'one computer at a time' basis. Before the development of the KVM Switch, the only way to control multiple computer configurations from a single console was through a complex and costly network system. Now, with the ACS-1722 / ACS-1724, you can easily access two to four computers in a cost effective manner.

Setup is fast and easy; plugging cables into their appropriate ports is all that is entailed. There is no software to configure, so there is no need to get involved in complex installation routines or be concerned with incompatibility problems. Since the ACS-1722 / ACS-1724 intercepts keyboard input directly, it works on any hardware platform and with all operating systems.

The ACS-1722 / ACS-1724 provides two convenient methods to access the computers connected to the system: using the push button Selection switch located on the unit's top panel; and entering Hotkey combinations from the keyboard.

There is no better way to save time and money than with a ACS-1722 / ACS-1724 installation. By allowing a single console to manage all of the attached computers, the ACS-1722 / ACS-1724 eliminates the expense of purchasing a separate keyboard, monitor, and mouse for each one. Additionally, it saves the extra space they would take up, and eliminates the inconvenience and wasted effort involved in constantly having to move from one PC to the other.

## **FEATURES**

- ◆ Dual Function KVM USB 2.0 Switch
- ◆ One Console Controls 2 (ACS-1722) or 4 (ACS-1724) Computers and Two Additional USB 2.0 Devices
- ◆ Fully Compliant with the USB 2.0 Specification. (Supports Transfer Rates of 1.5 / 12 / 480 Mbps.)
- ◆ Fully Backward Compatible to USB 1.1
- ◆ Supports Microsoft IntelliMouse and the Scrolling Wheel on Most Mice
- ◆ Easy to Install - No Software Required - Connecting Cables to the PCs Is All It Takes
- ◆ Easy to Operate - PC Selection Via Push Button Switch or Hotkeys - Auto Scanning
- ◆ LED Display For Easy Status Monitoring
- ◆ LED Overcurrent Detection for USB Ports
- ◆ Hot Pluggable
- ◆ Superior Video Quality - Up To 1920 x 1440; DDC2B
- ◆ Compatible With All Operating Platforms
- ◆ Efficient, Ergonomic Design; Logical Connector Layout
- ◆ Saves Time, Space, Power, and Equipment Costs

## **SYSTEM REQUIREMENTS**

### **CONSOLE**

- ◆ A VGA, SVGA, or Multisync monitor capable of the highest resolution that you will be using on any computer in the installation
- ◆ A PS/2 style keyboard
- ◆ A PS/2 style mouse

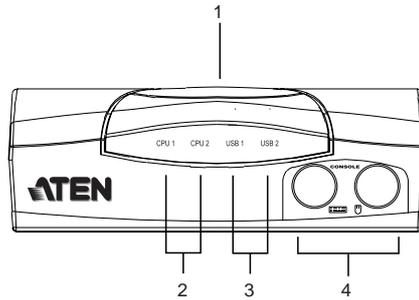
### **COMPUTERS**

The following equipment must be installed on each computer that is to be connected to the system:

- ◆ A VGA, SVGA or Multisync card.
- ◆ A 6-pin mini-DIN (PS/2 Style) mouse port.
- ◆ A 6-pin mini-DIN (PS/2 Style) keyboard port with +5V DC on pin 4.
- ◆ A USB Host Controller installed on the system
- ◆ Windows XP/ 2000\*, Win 98 / SE / ME

\* Transfer speeds of up to 480Mbps can only be achieved with USB 2.0 driver support. Currently, Windows XP and Windows 2000 have native USB 2.0 support. Support for other Windows versions will be forthcoming.

## ACS-1722 FRONT VIEW:



### 1. Port Selection / Auto Scan Switch

- ◆ Pressing this switch toggles the KVM focus between the two ports.
- ◆ Holding the switch down for 3 seconds activates Auto Scan Mode; pressing the switch while Auto Scan Mode is active, turns Auto Scan Mode Off.

### 2. CPU Port LEDs

A lit LED indicates that its corresponding Port is the one that has the KVM focus. A flashing LED indicates that the corresponding port is being accessed under Auto Scan Mode.

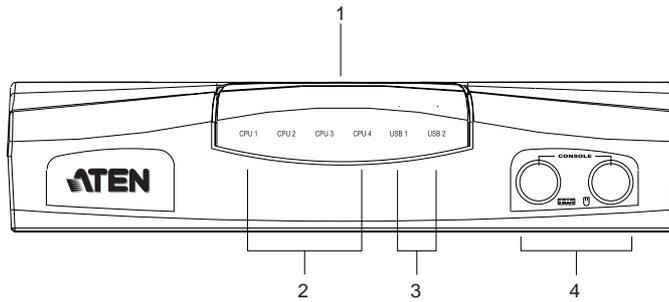
### 3. USB Port LEDs

The LED lights GREEN to indicate that the USB port it corresponds to is ONLINE. If an overcurrent situation occurs the LED changes to AMBER to indicate overcurrent status.

### 4. Console Keyboard and Mouse Ports

The cables from your PS/2 keyboard and PS/2 mouse plug in here. Each port is identified by an appropriate icon.

## ACS-1724 FRONT VIEW:



### 1. Port Selection / Auto Scan Switch

- ◆ Pressing this switch shifts the KVM focus to the next ascending port (1 to 2; 2 to 3, etc.) When you reach Port 4, you cycle back to Port 1.
- ◆ Holding the switch down for 3 seconds activates Auto Scan Mode; pressing the switch while Auto Scan Mode is active, turns Auto Scan Mode Off.

### 2. CPU Port LEDs

A lit LED indicates that its corresponding Port is the one that has the KVM focus. A flashing LED indicates that the corresponding port is being accessed under Auto Scan Mode.

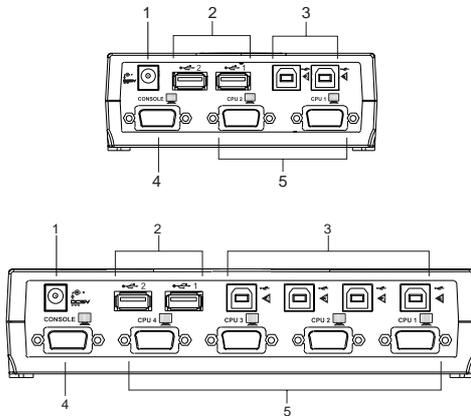
### 3. USB Port LEDs

The LED lights GREEN to indicate that the USB port it corresponds to is ONLINE. If an overcurrent situation occurs the LED changes to AMBER to indicate overcurrent status.

### 4. Console Keyboard and Mouse Ports

The cables from your PS/2 keyboard and PS/2 mouse plug in here. Each port is identified by an appropriate icon.

## ACS-1722 / ACS-1724 REAR VIEW



### 1. Power Jack

The DC 5V Power adapter cable plugs in here.

### 2. USB Peripheral Ports

Cables from any USB peripheral devices you wish to attach plug in here.

**Note:** Most USB devices (CCD Cameras, Scanners, Printers, e.g.) require their drivers to be shut down before disconnecting the device from the system. Otherwise, the system may crash. When you switch computers with the Port Selection Switch, it is the equivalent of disconnecting the device. Therefore, if you have peripheral devices (other than a second keyboard and mouse) connected to these ports, you must be sure to shut down the USB drivers for them before switching computers.

### 3. CPU Port Connectors

The USB cables that provide the data link to the computers, plug in here.

### 4. Console Video Connector

The cable from your monitor plugs in here.

### 5. CPU Port Video Connectors

The video cables that link to the computers, plug in here.

## INSTALLATION

Before you begin, make sure that power to all the devices you will be connecting up have been turned off.

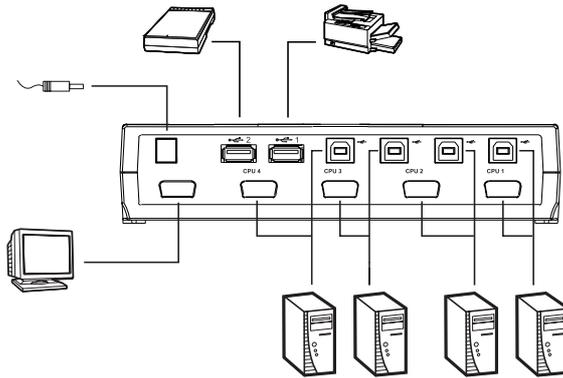
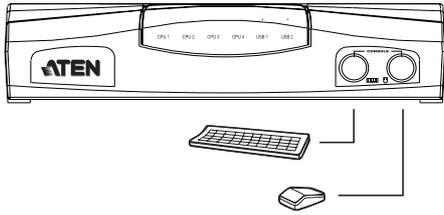


To prevent damage to your installation due to ground potential difference, make sure that all devices on the installation are properly grounded.

Refer to the diagram on p. 8, and follow the steps below:

1. Plug the keyboard and mouse into the Console Keyboard and Mouse port connectors on the front panel of the unit. Plug the monitor into the Console Video port connector on the rear panel of the unit.
2. Use one of the Custom Cables provided with this package to connect any available Video/USB port combination on the KVM switch to the USB and Video ports on the computer you are connecting up.
3. Repeat step 2 for any other computers you are connecting up.
4. Plug the Power adapter into an AC source, then plug the adapter cable into the unit's Power Jack.
5. Power on all devices.

- Note:**
1. The Power On default is to link to Port 1. If the computer attached to Port 1 is inactive, the monitor will be blank so it may appear as if the unit is not functioning. This is not the case. Simply press the Port Selection Switch to switch to an active computer port.
  2. The Mac's keyboard Power On function is not supported. You must start the Mac with its Power On switch.
  6. Plug the USB peripherals into either USB type A port. The first time that the peripherals are introduced to each computer, Windows will install the necessary drivers for them. (Refer to the note under *USB Peripheral Ports* on p. 6.)



## **OPERATION**

Controlling all the computers in your ACS-1722 / ACS-1724 installation from a single console could not be easier. Two CPU Port selection methods that provide instant access to the computers are available:

- ◆ Manual CPU Port Selection
- ◆ Hotkey CPU Port Selection

### **MANUAL CPU PORT SELECTION**

With Manual Port Selection you simply press the Port Selection button to switch the KVM focus to the next Port. If you are at Port 4 (ACS-1724), you cycle back to Port 1. The CPU Port LED lights to indicate which Port has the KVM focus.

### **HOTKEY CPU PORT SELECTION**

Hotkey navigation allows you to select the active computer directly from the keyboard, instead of having to manually select it with the Port Selection switch. The ACS-1722 / ACS-1724 provides two Hotkey navigation features:

- ◆ Selecting the Active Port
- ◆ Auto Scan Mode

#### **Selecting the Active Port:**

There are two methods to select the port for the KVM focus:

1. You can switch to the next computer port by pressing and releasing the left or right Ctrl key twice in rapid succession:

[Ctrl] + [Ctrl]

2. Each CPU Port is assigned a Port Number (1, 2, 3, or 4). You can switch directly to any port by holding down the Ctrl and Shift keys; then pressing the Function Key that corresponds to the CPU Port number; and then releasing them all together

[Ctrl + Shift] + [Fn]

Where n represents a Port Number from 1 to 4.

**Note:** 1. The Ctrl and Shift Key combinations must be on the same side (both on the Left, or both on the Right).:

[LCtrl] + LCtrl] or [RCtrl] + [RCtrl];

[LCtrl + LShift] or [RCtrl + RShift]

2. If the [Ctrl] + [Ctrl] combination conflicts with programs running on the computers, an alternate method of pressing the Scroll Lock key twice in rapid succession is available. In order to use this alternate method, you must first invoke it by holding down the Ctrl and Shift keys; then pressing the F12 Function Key:

[Ctrl + Shift] + [F12]

3. For any [Ctrl + Shift] combination, you can also press and release the [Ctrl], [Shift], and Function keys in sequence ([Ctrl], then [Shift], then [Fn]).

**Auto Scan Mode:**

The ACS-1722 / ACS-1724's Auto Scan feature automatically cycles through the Ports at regular 5 seconds intervals so that you can monitor the computer activity without having to take the trouble of switching yourself. To invoke Auto Scan Mode:

1. Hold down the Ctrl and Shift keys

2. Press the F10 key down; then release all three of them together:

[LCtrl + LShift] + [F10]

**Note:** 1. As an alternate method, you can also press and release the keys in sequence [LCtrl], then [LShift], then [F10].

2. Once scanning begins, it continues until you press the [Spacebar] to exit Auto Scan Mode. The Port that was currently active at the time scanning stopped remains active.

3. While Auto Scan Mode is in effect, ordinary keyboard and mouse functions are suspended, and USB peripheral ports are disabled. You must exit Auto Scan Mode by pressing the [Spacebar] in order to regain their normal functions.

## HOTKEY SUMMARY TABLE

Combination	Action
[L Ctrl]+[L Ctrl] or [R Ctrl]+[R Ctrl]	Shifts the KVM focus to the next CPU Port. (Default Method)
[Scroll]+[Scroll]	Shifts the KVM focus to the next CPU Port. (Alternate Method)
[Ctrl+Shift]+[F1]; or [Ctrl]+[Shift]+[F1]	Shifts the KVM focus to CPU Port 1.
[Ctrl+Shift]+[F2]; or [Ctrl]+[Shift]+[F2]	Shifts the KVM focus to CPU Port 2.
[Ctrl+Shift]+[F3] or [Ctrl]+[Shift]+[F3]	Shifts the KVM focus to CPU Port 3.*
[Ctrl+Shift]+[F4] or [Ctrl]+[Shift]+[F4]	Shifts the KVM focus to CPU Port 4.*
[Ctrl+Shift]+[F10]; or [Ctrl]+[Shift]+[F10]	Invokes Auto Scan Mode.
[Ctrl+Shift]+[F12]; or [Ctrl]+[Shift]+[F12]	Invokes the Alternate Hotkey Method.

\* ACS-1724 only

## SELECTED LED DISPLAY

Activity	Meaning
Off	Port is not selected.
On (Steady)	Port is connected to an active computer.
Flashing (On and Off equal)	Port is connected to an active computer and is being accessed in Auto Scan mode.

## SPECIFICATIONS

Function		ACS-1722	ACS-1724
Power Consumption		DC 5V; 180 mW (max.)	DC 5V; 400 mW (max.)
Port Selection		Pushbutton Switch; Hotkeys	
CPU Ports		2	4
CPU LEDs	Selected	2 Green	4 Green
USB LEDs	Online	2 - Green (Normal)/Amber (Overcurrent)	
Console Connectors	Keyboard	1 x 6 pin mini-DIN F	
	Mouse	1 x 6 pin mini-DIN F	
	Monitor	1 x 15 pin HDB F	
CPU Connectors	KB / Mouse	2 x USB Type B	4 x USB Type B
	Video	2 x 15 pin HDB F	4 x 15 pin HDB F
Peripheral Connectors		2 x USB Type A	
Resolution		1920 x 1440; DDC2B	
Scan Interval		5 secs.	
Operating Temperature		0 - 50° C	
Storage Temperature		-20 - 60° C	
Humidity		0 - 80% RH, Non condensing	
Housing		Plastic	
Weight		200 g	390 g
Dimensions (L x W x H)		120 x 64 x 44 mm	195 x 70 x 43.5 mm

## TROUBLESHOOTING

Symptom	Cause	Action
Keyboard and/or Mouse <sup>1</sup> Not Responding	Loose cables.	Check all cable connections to make sure they are completely seated in their sockets.
	Master View is in Auto Scan Mode.	Press the [Spacebar] to exit Auto Scan Mode.
	Keyboard needs to be reset.	Unplug the keyboard from the Console Keyboard Port, then plug it back in.
	Mouse needs to be reset.	Unplug the mouse from the Console Keyboard Port, then plug it back in.
	Mouse in Unsupported Mode.	Some mice can be set to act as either a PS/2 or serial mouse. Make sure the mouse is set to PS/2 mode.  Because of the wide variety of mouse driver standards for the modern series of mice (the ones with the extra buttons and wheels), this unit only supports all of the extra features of the Microsoft Intellimouse. It supports the scroll wheel function of most other mice.
	Master View needs to be reset.	Turn off the computers; wait 5 seconds; turn the computers back on.
Video Problems	Loose cables.	Check all cable connections to make sure they are completely seated in their sockets.
	Resolution and/or Bandwidth set too high.	This unit supports VGA, SVGA, Multisync, and XGA (interlaced), with resolutions of up to 1920x1440 Hz.
	Cable quality not good enough.	We strongly recommend that you use high quality cables. Use of high quality cables should eliminate video problems.

1. Some Notebooks, notably the IBM Thinkpad and Toshiba Tecra, have trouble when their mouse and keyboard ports are used simultaneously. To avoid this, only connect the mouse port or the keyboard port. If you connect the mouse port, you will need to use the notebook's keyboard when the notebook becomes the active computer.

**LIMITED WARRANTY**

IN NO EVENT SHALL THE DIRECT VENDOR'S LIABILITY EXCEED THE PRICE PAID FOR THE PRODUCT FROM DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THE PRODUCT, DISK, OR ITS DOCUMENTATION.

The direct vendor makes no warranty or representation, expressed, implied, or statutory with respect to the contents or use of this documentation, and especially disclaims its quality, performance, merchantability, or fitness for any particular purpose.

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