

Slideaway™ LCD KVM Switch
CL1008 / CL1016
User Manual



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FCC Information

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

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 will be required to correct the interference at his own expense.

RoHS

This product is RoHS compliant.

SJ/T 11364-2006

The following contains information that relates to China.

部件名称	有毒有害物质或元素					
	铅	汞	镉	六价铬	多溴联苯	多溴二苯醚
电器部件	●	○	○	○	○	○
机构部件	○	○	○	○	○	○

- : 表示该有毒有害物质在该部件所有均质材料中的含量均在SJ/T 11363-2006规定的限量要求之下。
- : 表示符合欧盟的豁免条款, 但该有毒有害物质至少在该部件的某一均质材料中的含量超出SJ/T 11363-2006的限量要求。
- ×: 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出SJ/T 11363-2006的限量要求。



User Information

Online Registration

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

International	http://support.aten.com
North America	http://www.aten-usa.com/product_registration

Telephone Support

For telephone support, call this number:

International	886-2-8692-6959
China	86-10-5255-0110
Japan	81-3-5615-5811
Korea	82-2-467-6789
North America	1-888-999-ATEN ext 4988
United Kingdom	44-8-4481-58923

User Notice

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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

Basic Package

The basic CL1008 or CL1016 package consists of:

- ◆ 1 CL1008 or CL1016 with Standard Rack Mount Kit
- ◆ 2 Custom KVM Cable Sets
- ◆ 1 Power Cord
- ◆ 1 Firmware Upgrade Cable
- ◆ 1 User Manual*
- ◆ 1 Quick Start Guide

Optional Equipment

Depending on any optional equipment that you may have purchased, one of the following may be included in your package:

- ◆ Standard Rack Mounting Kit - Long
- ◆ Easy-Installation Rack Mounting Kit - Short
- ◆ Easy-Installation Rack Mounting Kit - Long

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.

* Features may have been added to the CL1008 / CL1016 since this manual was printed. Please visit our website to download the most up-to-date version of the manual.

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About this Manual

This User Manual is provided to help you get the most from your CL1008 / CL1016 system. 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 CL1008 / CL1016 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 step – from a basic single stage hookup to a complete 16 switch daisy chained operation are provided.

Chapter 3, Basic Operation, explains the fundamental concepts involved in operating the CL1008 / CL1016.

Chapter 4, OSD Operation, provides a complete description of the CL1008 / CL1016's OSD (on-screen display), and how to work with it.


Chapter 5, Hotkey Operation, details all of the concepts and procedures involved in the Hotkey operation of your CL1008 / CL1016 installation.

Chapter 6, The Firmware Upgrade Utility, explains how to use this utility to upgrade the CL1008 / CL1016's firmware with the latest available versions.

An Appendix, provides specifications and other technical information regarding the CL1008 / CL1016.

Conventions

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

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	http://www.aten.com
North America	http://www.aten-usa.com

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Chapter 1

Introduction

Overview

The CL1008 / CL1016 Slideaway™ LCD KVM Switch series are control units that allow access to multiple computers from a single keyboard, video, and mouse (KVM) console. A single CL1008 or CL1016 can control up to 8 or 16 computers. As many as 15 additional KVM switches can be daisy chained to the CL1008 / CL1016, so that up to 256 computers can all be controlled from a single KVM console.

The CL1008 / CL1016 offers a space-saving, streamlined approach to KVM switch technology by integrating a keyboard, LCD monitor, and touchpad in a 1U rack-mountable sliding housing. The LCD display is built into the cover; the keyboard and touchpad are built into the base. Slide the KVM module section out; flip the cover up; and you are ready to work. When finished, flip the cover down and slide the KVM module away.

The CL1008 / CL1016 is built on a modular design. The KVM section can be detached from the switch section for convenient maintenance and repair.

Your CL1008 / CL1016 investment is protected by an included *Firmware Upgrade Utility*. You can stay current with the latest improvements to the switch by downloading firmware update files from our website as they become available, and using the utility to quickly and conveniently perform the upgrade.

Setup is fast and easy; plugging cables into their appropriate ports is all that is entailed. Because the CL1008 / CL1016 intercepts keyboard input directly, there is no software to configure; no need to get involved in complex installation routines; nor any need to be concerned with incompatibility problems.

Access to any computer connected to the installation is easily accomplished either by entering hotkey combinations from the keyboard, or by means of a powerful, mouse driven, on-screen display (OSD) menu system. A convenient *Auto Scan* feature also permits automatic scanning and monitoring of the activities of all computers running on the installation one by one.

Features

- ◆ KVM console with 17" LCD monitor in a sliding housing – top and bottom clearance for smooth operation in a 1U high system rack
- ◆ LCD module rotates up to 115° for a more comfortable viewing angle
- ◆ Standard rack mount kit included – optional *Easy Rack Mounting* (single person installation) rack mount kit available (requires separate purchase)
- ◆ Daisy chain up to 15 additional units – control up to 128 (CL1008) or 256 (CL1016) computers
- ◆ No software required – convenient computer selection via hotkeys and mouse driven intuitive on-screen display (OSD) menus
- ◆ Auto Scan feature for monitoring user-selected computers
- ◆ Broadcast support – commands from the keyboard can be broadcast to all available computers on the installation
- ◆ Hot pluggable – add or remove computers without having to power down the switch
- ◆ Two level password security – only authorized users view and control the computers – up to four users plus an administrator with separate profiles for each
- ◆ Video settings of attached computers are automatically adjusted for optimal output to the LCD monitor
- ◆ Upgradable firmware
- ◆ Language support: English (US); English (UK); French; German; German (Swiss); Italian; Japanese; Hungarian; Korean; Spanish; Swedish; Traditional Chinese; Russian

Requirements

Computers

The following equipment must be installed on each computer:

- ♦ A VGA, SVGA or multisync card

Note: The integrated LCD monitor's maximum resolution is 1280 x 1024 @ 75 Hz. Make sure that none of the computer resolution settings exceed the LCD monitor's maximum resolution.

- ♦ 6-pin Mini-DIN (PS/2 style) keyboard and mouse ports

Cables

Substandard cables may damage the connected devices or degrade overall performance. For optimum signal integrity and to simplify the layout, we strongly recommend that you use the high quality CS Custom Cable sets described below:

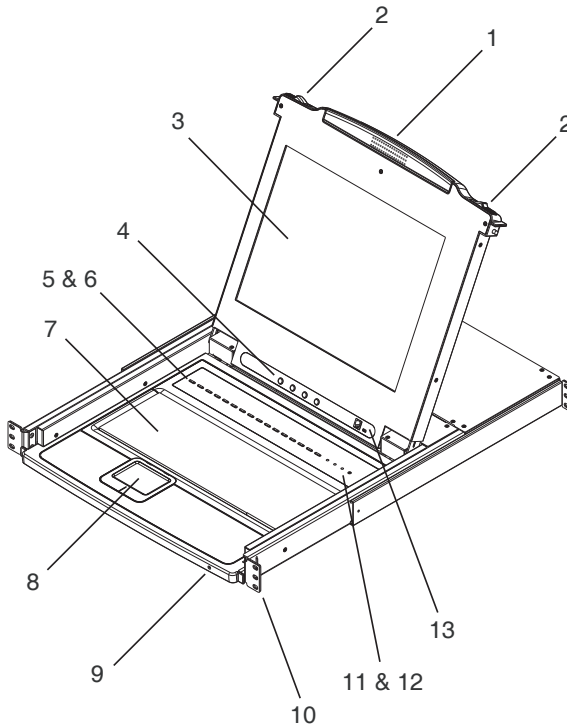
Function	Part Number	Length
KVM Switch to KVM Switch (Daisy Chaining)	2L-1700	0.6 m
	2L-1701	1.8 m
	2L-1703	3.0 m
	2L-1705	5.0 m
KVM Switch to Computer	2L-5201P	1.2 m
	2L-5202P	1.8 m
	2L-5203P	3.0 m
	2L-5206P	6.0 m

OS Support

OS	Version	
Windows	2000 and higher	
Linux	RedHat	7.1–7.3, 8.0, 9.0, Fedora Core 2–4
	SuSE	8.2, 9.3, 10
	Mandriva (Mandrake)	9, 2005 Limited Edition, 2006
UNIX	IBM	AIX: 4.3, 5L
	FreeBSD	4.2, 4.5
Novell	Netware: 5.0, 6.0	

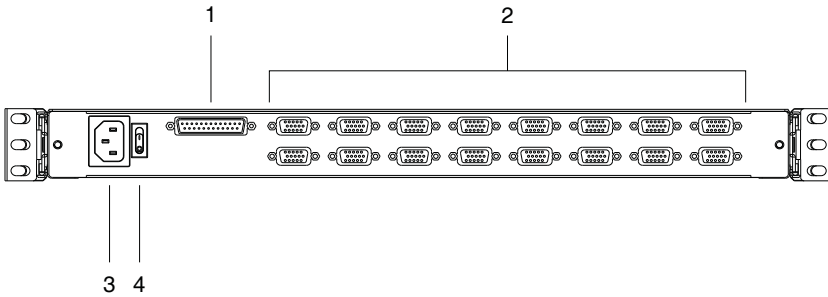
Components

Front View



No.	Component	Description
1	Handle	Pull to slide the KVM module out; push to slide the module in (see item 2 in this table).
2	Slide Release	In order to slide the console out, you must first release it by sliding these tabs to the inside. See page 13 for details on sliding the console in and out.
3	LCD Display	After sliding the KVM module out, flip up the cover to access the LCD monitor.
4	LCD Controls	The LCD On/Off switch is located here, as well as buttons to control the position and picture settings of the LCD display. See page 17 for details.
5	Port Switches	Press a switch to bring the KVM focus to the computer attached to its corresponding port. See page 19 for details.
6	Port LEDs	<p>Two Port LEDs are built into the Port Switches. The one on the left is the <i>On Line</i> LED; the one on the right is the <i>Selected Port</i> LED:</p> <ul style="list-style-type: none"> ◆ An <i>On Line</i> LED lights ORANGE to indicate that the computer attached to its corresponding port is up and running. ◆ A <i>Selected</i> LED lights GREEN to indicate that the computer attached to its corresponding port has the KVM focus. The LED is steady under normal conditions, but flashes when its port is accessed under <i>Auto Scan Mode</i> (see <i>F7: SCAN</i>, page 33).
7	Keyboard	Standard mouse touchpad
8	Touchpad	Standard 105-key keyboard
9	Power LED	Lights DARK GREEN to indicate that the unit is receiving power.
10	Rack Mounting Brackets	The rack mounting brackets located at each corner of the unit secure the chassis to a system rack.
11	Lock LEDs	The Num Lock, Caps Lock, Scroll Lock LEDs are located here.
12	Reset Switch	Located to the right of the Lock LEDs. Press this recessed switch in with a small object to perform a system reset.
13	Firmware Upgrade Section	<ul style="list-style-type: none"> ◆ Firmware Upgrade Port: The Firmware Upgrade Cable that transfers the firmware upgrade data from the administrator's computer to the CL1008 / CL1016 plugs into this RJ-11 connector. ◆ Firmware Upgrade Switch: During normal operation this switch should be in the NORMAL position. (See p. 41 for firmware upgrading details.)

Rear View



No.	Component	Description
1	Daisy Chain Port	When daisy chaining units, the cable plugs in here.
2	KVM Port Section	The cables that link to the computers plug in here. Note: The shape of these SPHD connectors has been specifically modified so that only KVM cables designed to work with this switch can plug in (see the <i>Cables</i> section on page 3, for details). Do NOT attempt to use ordinary 15 pin VGA connector cables to link these ports to the computers.
3	Power Socket	This is a standard 3-prong AC power socket. The power cord from an AC source plugs in here.
4	Power Switch	This standard rocker switch powers the unit on and off.

Note: The CL1016 is pictured above. The CL1008 rear panel is the same as that of the CL1016, except that it has 8 KVM ports instead of 16.

Chapter 2

Hardware Setup

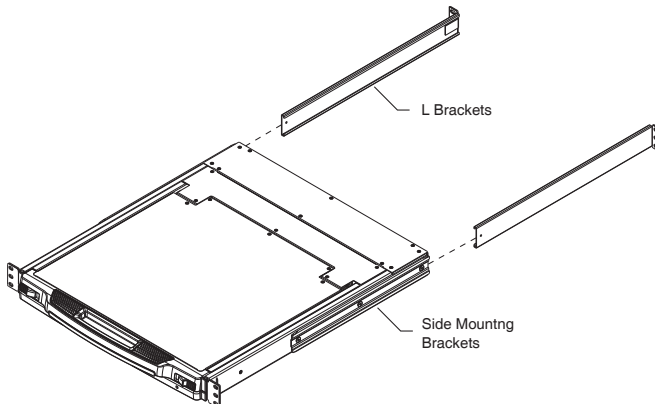
Before you Begin



1. Important safety information regarding the placement of this device is provided on page 47. Please review it before proceeding.
2. Make sure that power to all the devices you will be connecting up have been turned off. You must unplug the power cords of any computers that have the Keyboard Power On function.

Standard Rack Mounting

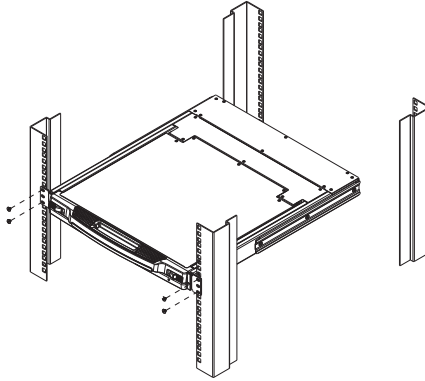
A standard rack mounting kit is provided with your CL1008 / CL1016. The kit enables the switch to be mounted in rack with a depth of 42.0–82.0 cm.



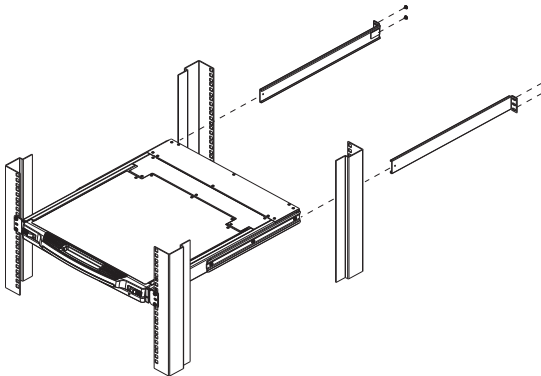
-
- Note:**
1. It takes two people to mount the switch: one to hold it in place, the other to screw it in.
 2. The standard rack mounting kit does not include screws or cage nuts. If you need additional screws or cage nuts, contact your rack dealer.
 3. Optional mounting kits – including single person *Easy Installation* kits – are available with a separate purchase. See *Optional Rack Mounting*, p. 56 for details.
-

To rack mount the switch, do the following:

1. While one person positions the switch in the rack and holds it in place, the second person loosely screws the front brackets to the rack.



2. While the first person still holds the switch in place, the second person slides the L brackets into the switch's side mounting brackets, from the rear until the bracket flanges contact the rack, then screws the L brackets to the rack.



3. After the L brackets have been secured, tighten the front bracket screws.

Note: Allow at least 5.1 cm on each side for proper ventilation, and at least 12.7 cm at the back for the power cord and cable clearance.

Single Stage Installation

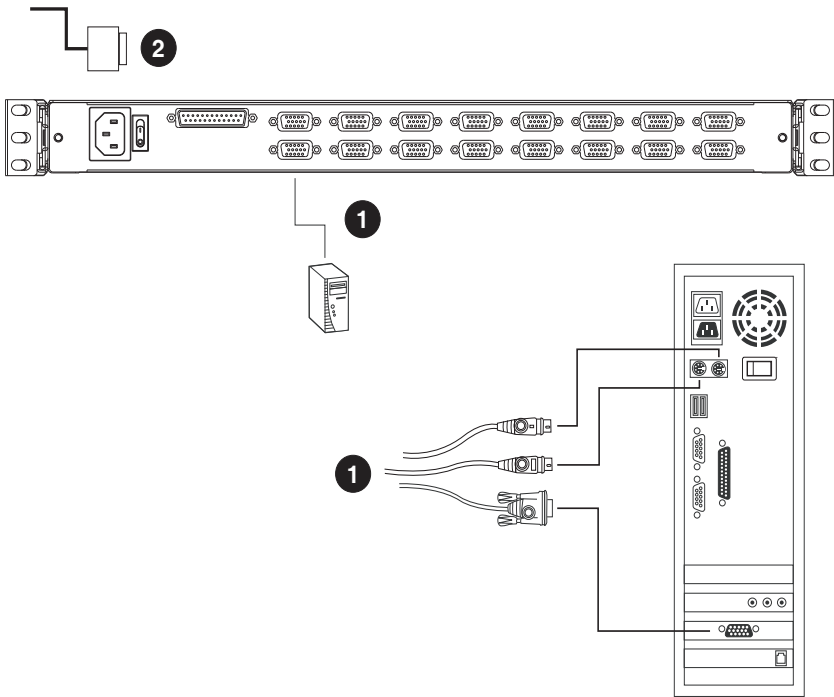
In a single stage installation, there are no additional switches daisy chained down from the first unit. To set up a single stage installation, refer to the installation diagram on the next page (the numbers in the diagram correspond to the numbers of the installation steps), and do the following:

1. For each of the computers you are installing, use a KVM cable set (as described in the *Cables* section on page 3) to connect any available KVM port to the computer's keyboard, video and mouse ports.

Note: Ignore the daisy chain port at this time. It is only used when daisy chaining additional units. Daisy chaining is described in the next section.

2. Use the power cord provided with this package to connect the switch's power socket to an AC power source.

This completes the installation. Now, you can power on the switch (see *Powering Up*, page 16 for details). After the switch is powered on, power on the computers.



Note: The CL1016 is pictured above. The CL1008 rear panel is the same as that of the CL1016, except that it has 8 KVM ports instead of 16.

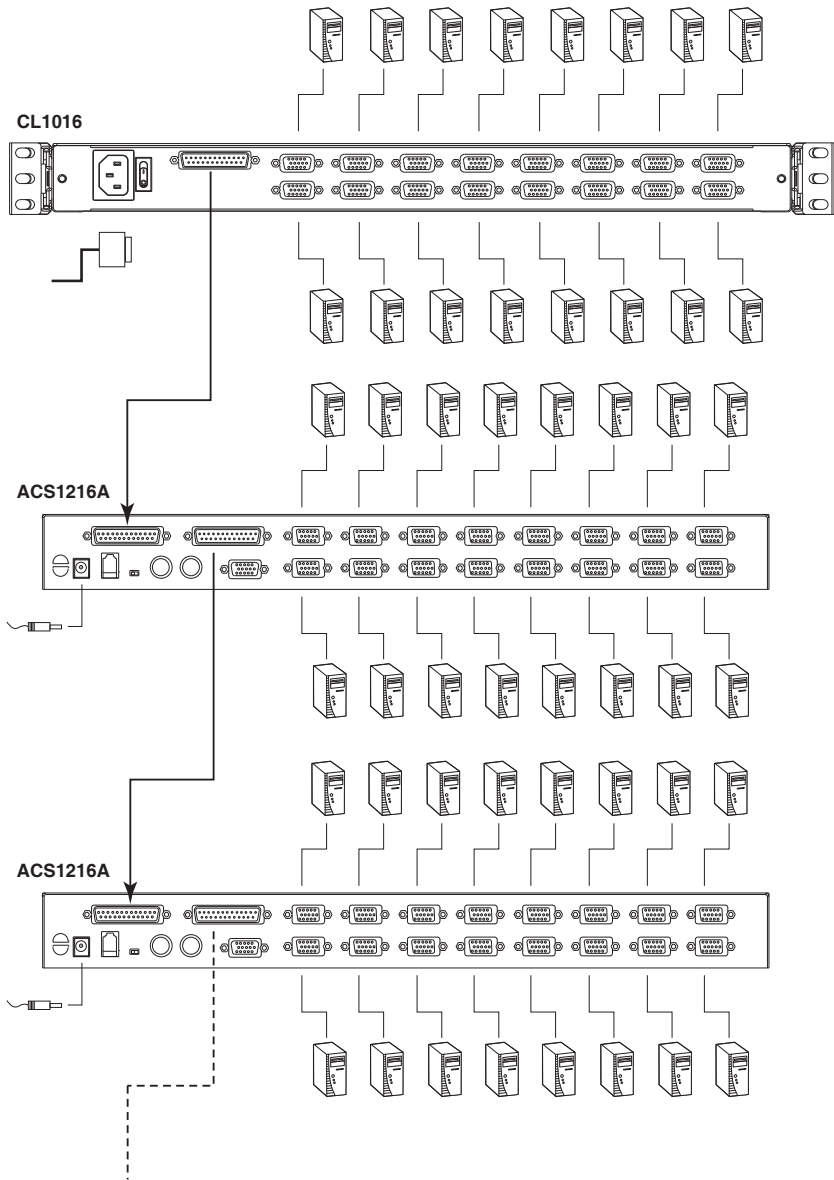
Daisy Chain Installation

To control even more computers, up to 15 ACS1208A or ACS1216A KVM switches can be daisy chained down from the CL1008 / CL1016.

In a complete installation, as many as 248 or 256 computers can be controlled from the CL1008 / CL1016. Tables showing the relation between the number of computers and the number of units needed to control them are provided on page 53.

To set up a daisy chained installation, first make sure that power to all the devices you will be connecting up has been turned off. Then, refer to the daisy chain installation diagram on the next page as you do the following:

1. Use a daisy chain cable set (described in the *Cables* section, page 3), to connect the *Chain Out* port of the parent unit to the *Chain In* port of the child unit (first station out to second station in, second station out to third station in, etc.).
2. Use KVM cable sets (described in the *Cables* section of the ACS1208A / ACS1216A user manual), to connect any available KVM Port on the daisy chained switch to the keyboard, video and mouse ports of the computers you are installing.
3. Repeat the above steps for any additional units you wish to add to the chain.



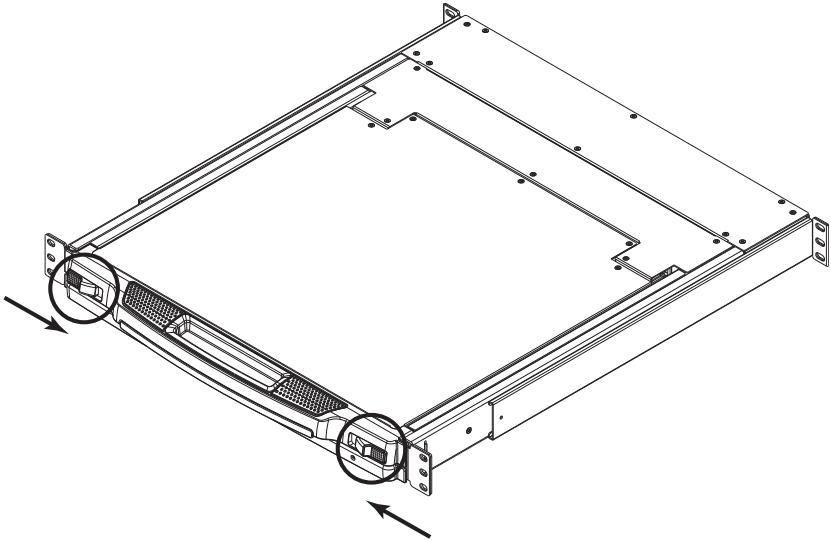
Note: The CL1016 is pictured above. The CL1008 rear panel is the same as that of the CL1016, except that it has 8 KVM ports instead of 16.

Chapter 3

Basic Operation

Opening the Console

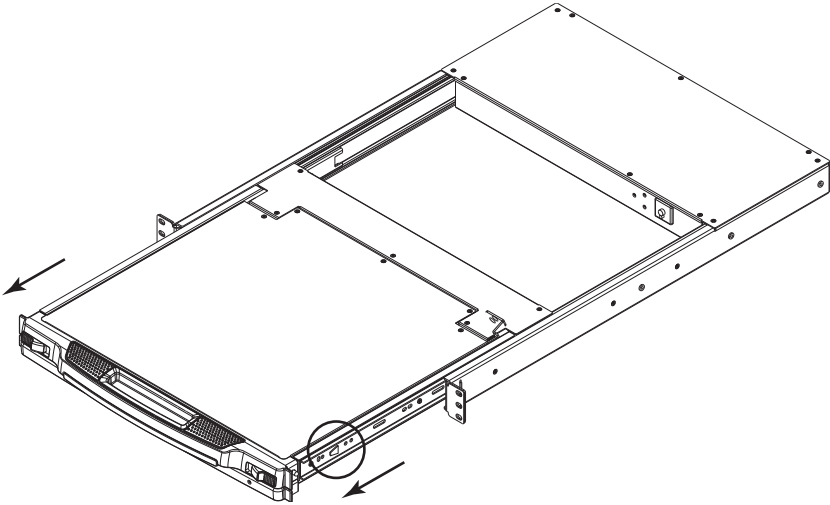
The CL1008 / CL1016's console is located under the top cover. As a safety precaution, the console is locked into the *In* position. To access the console, push the release catches on the unit's front panel toward the center of the switch; pull the module out; and raise the cover.



Closing the Console

To slide the console module in, close the cover and do the following:

1. Pull the safety catches on the unit's side rails toward you and push the module in until it stops.
2. Release the catches; pull the module slightly toward you; then push it all the way in.

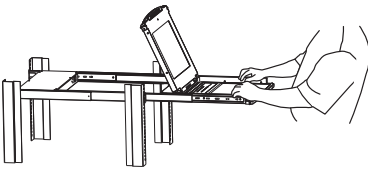
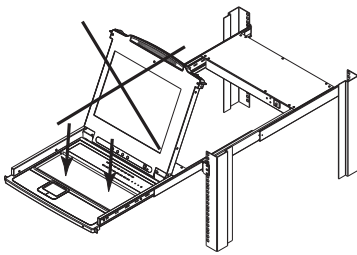


Note: The reason for the two step procedure is to minimize the chances of getting your fingers pinched when sliding the module in.

Operating Precautions



The maximum load bearing capacity of the keyboard module is 30 kg. Failure to heed the information below can result in damage to the keyboard module.

	<p>Right!</p> <p>Rest your hands and arms lightly on the keyboard module as you work.</p>
	<p>Wrong!</p> <ul style="list-style-type: none">◆ DO NOT lean your body weight on the keyboard module.◆ DO NOT place heavy objects on the keyboard module.

Powering Up

Power up the installation according to the following procedure:

1. Power on the first station (CL1008 / CL1016) and wait a few seconds for the unit to ascertain its station ID.

2. Plug in the power adapters for each daisy chained station on the installation in turn (second station, then third station, etc.).

Each ACS1208A / ACS1216A has a LED display on its front panel to indicate its station ID (the station ID for the first stage unit is 01, the ID for the second stage unit is 02, the ID for the third stage unit is 03, etc.).

In each case, wait for the station ID to be ascertained and displayed on the station ID LED before plugging in the next station.

3. After all the stations are up, power on the computers.



Powering Off and Restarting

If it becomes necessary to power off the CL1008 / CL1016, or if the switch loses power and needs to be restarted, wait 10 seconds before powering it back on. The computers should not be affected by this, but if any of them should fail, simply restart the affected computers.

LCD OSD Configuration

The LCD Buttons

The LCD OSD allows you to set up and configure the LCD display. Four buttons are used to perform the configuration, as described in the table, below:

Button	Function
MENU	<ul style="list-style-type: none"> ◆ When you have not entered the LCD OSD Menu function, pressing this button invokes the Menu function, and brings up the Main Menu. ◆ When you have entered the LCD OSD Menu function, and have reached a setting choice with the navigation buttons, pressing this button brings up its adjustment screen.
	When navigating through the menus, this button moves you Right or Up. When making an adjustment, it increases the value.
	When navigating through the menus, this button moves you Left or Down. When making an adjustment, it decreases the value.
EXIT	<ul style="list-style-type: none"> ◆ When you have not entered the LCD OSD Menu function, pressing this button performs an auto adjustment. An auto adjustment automatically configures all the settings for the LCD panel to what the OSD considers their optimum values to be. ◆ When you have entered the LCD OSD Menu function, pressing this button exits the current menu and returns you to the previous menu. Use it to leave an adjustment menu when you are satisfied with the adjustment you made. ◆ When you are at the Main Menu, pressing this button exits the LCD OSD.

LCD Adjustment Settings

An explanation of the LCD OSD adjustment settings is given in the table below:

Setting	Explanation
Brightness	Adjusts the background black level of the screen image.
Contrast	Adjusts the foreground white level of the screen image.
Phase	If pixel jitter or horizontal line noise is visible on the display, your LCD may have the wrong phase setting. Adjust the phase setting to eliminate these problems.
Clock	If vertical banding is visible on the display, your LCD may have the wrong clock setting. Adjust the clock setting to eliminate vertical banding.
H-Position	Positions the display area on the LCD panel horizontally (moves the display area left or right).
V-Position	Positions the display area on the LCD panel vertically (moves the display area up or down).
Color Temperature	Adjusts the color quality of the display. You can adjust the warmth value, color balance, etc. The <i>Adjust Color</i> selection has a further submenu that lets you fine tune the RGB values.
Language	Selects the language that the OSD displays its menus in.
OSD Duration	Lets you set the amount of time the OSD displays on the screen. If there is no input for the amount of time you choose, the OSD display turns off.
Reset	Resets the adjustments on all menus and submenus to their factory default settings. Note: The <i>Language</i> setting does not return to the factory default, but remains at the one that you have set it to.

Port ID Numbering

Each KVM port on the installation is assigned a unique Port ID. The Port ID is made up of two parts: a *Station Number*, and a *Port Number*:

- ♦ The *Station Number* – is a two digit number which reflects the switch's position in the daisy chain sequence.

Note: 1. The first station CL1008 / CL1016 has a station number of 01. The first daisy chained unit has a station number of 02, etc.

2. The daisy chained switches have front panel LEDs that display their station IDs.

- ♦ The *Port Number* – is a two digit number which reflects the port on the station that the computer is connected to.
- ♦ The station number precedes the Port Number.
- ♦ Station and port numbers from 1–9 are padded with a preceding zero, so they become 01–09.

For example, a computer attached to **Port 6** of **Station 12** would have a port ID of **12-06**.

Port Selection

The CL1008 / CL1016 provides three port selection methods you can use to access the computers on the installation: manual; OSD menus, and hotkey. Manual port switching is discussed below; OSD operation is discussed in the next chapter; hotkey port selection is discussed in Chapter 5.

Manual Port Switching

- ♦ Press a switch to bring the KVM focus to the computer attached to its corresponding port.
- ♦ Press buttons 1 and 2 simultaneously for two seconds to perform a keyboard and mouse reset.
- ♦ Press buttons 7 and 8 (CL1008), or 15 and 16 (CL1016) simultaneously for two seconds to invoke *Auto Scan Mode* (see p. 37).

Hot Plugging

The CL1008 / CL1016 supports hot plugging – computers can be removed and added back into the installation by unplugging and replugging their cables from/into the switch's KVM ports.

In order for the switch's OSD menus to correspond to the change, however, you must manually reconfigure the OSD to reflect the new port information. See *F3: SET*, page 26, and *F4: ADM*, page 28, for details.

Note: If the computer's operating system does not support hot plugging, this function may not work properly.

Chapter 4

OSD Operation

OSD Overview

The on-screen display (OSD) is a menu driven method to handle computer control and switching operations. All procedures start from the OSD main screen.

There are two ways to invoke the OSD:

1. Tap the OSD invocation key on the keyboard (see p. 60), or
2. Tap the **[Scroll Lock]** key twice.

Note: Scroll Lock] is the default OSD hotkey. You can optionally change the OSD Hotkey to the Ctrl key (see *OSD Hotkey*, page 26), in which case you would press **[Ctrl]** twice. If you choose this method, you must press the same [Ctrl] key both times.

Logging In

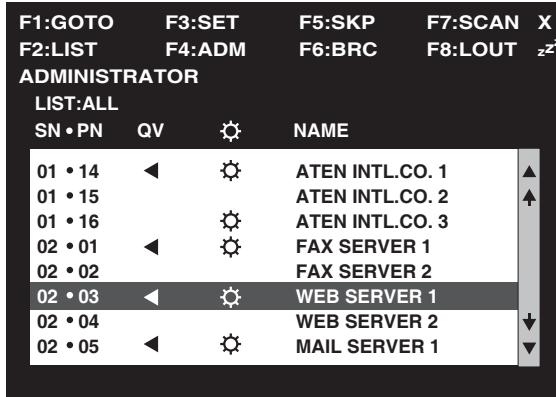
The OSD incorporates a two level (administrator / user) authorization procedure. Before the OSD main screen comes up, a login dialog box appears requesting a username and password.

If this is a first time log in, or if the password function has not been set, simply press **[Enter]**. The OSD main screen displays in administrator mode. In this mode, you have administrator privileges, with access to all administrator and user functions, and can set up operations (including password authorization) as you like.

If the password function has been set, you must provide a valid username and password in order to access the OSD.

OSD Main Screen


When you invoke the OSD, a screen similar to the one below appears:



- Note:**
1. The diagram depicts the administrator's main screen. The user main screen does not show the **F4** and **F6** functions since these are reserved for the administrator and can't be accessed by users.
 2. The OSD always starts in List view, with the highlight bar at the same position it was in the last time it was closed.
 3. Only the ports that have been set accessible by the administrator for the currently logged in user are visible (see *SET ACCESSIBLE PORTS*, page 30, for details).

OSD Main Screen Headings

The table below describes the OSD Main Screen headings

Heading	Explanation
SN-PN	This column lists the port ID numbers (station number - port number) for all the KVM ports on the installation. The simplest method to access a particular computer is to click it, or move the highlight bar to it, then press Enter .
QV	If a port has been selected for quick view scanning (see <i>Set Quick View Ports</i> , page 30), an arrowhead displays in this column.
	The computers that are powered on and are on line have a sun symbol in this column.
NAME	If a port has been given a name (see <i>Edit Port Names</i> , page 29), its name appears in this column.

OSD Navigation

- ◆ To dismiss the menu, and deactivate the OSD, Click the **X** at the upper right corner of the OSD window; or press [**Esc**].
- ◆ To Logout, click **F8** or the **zZ** symbol at the top of the main screen, or press [**F8**].
- ◆ To move up or down through the list one line at a time, click the up or down symbols (**▲▼**) or use the up or down arrow keys. If there are more list entries than there is room for on the main screen, the screen will scroll.
- ◆ To move up or down through the list one screen at a time, click the up or down arrow symbols (**↑↓**), or use the [Pg Up] or [Pg Dn] keys. If there are more list entries than there is room for on the main screen, the screen will scroll.
- ◆ To bring the KVM focus to a port, double click it, or move the highlight bar to it then press [**Enter**].

OSD Functions

OSD functions are used to configure and control the OSD. For example, you can: rapidly switch to any port, scan selected ports only, limit the list you wish to view, designate a port as a quick view port, create or edit a port name, or make OSD setting adjustments.

To access an OSD function:

1. Either click a function key field at the top of the main screen, or press a function key on the keyboard.
2. In the submenus that appear make your choice either by double clicking it, or moving the highlight bar to it, then pressing **[Enter]**.
3. Press **[Esc]** to return to the previous menu level.

F1: GOTO

GOTO allows you to switch directly to a port either by keying in the port's *Name*, or its *Port ID*.

- ♦ To use the name method, key in **1**; key in the port's name; then press **[Enter]**.
- ♦ To use the port ID method, key in **2**; key in the *Port ID*; then press **[Enter]**.

Note: You can key in a partial name or port ID, in which case the screen will show all the computers that the user has *View* rights to (see *SET ACCESSIBLE PORTS*, page 30) that match the name or port ID pattern, regardless of the current List settings (see *F2 LIST*, page 25, for details).

To return to the OSD main screen without making a choice, press **[Esc]**.

F2: LIST

This function lets you broaden or narrow the scope of the ports the OSD displays on the main screen. Many of the OSD functions only operate on the computers currently selected for listing on the main screen with this function. The submenu choices and their meanings are given in the table below:

Choice	Meaning
ALL	Lists all of the ports on the installation.
QUICK VIEW	Lists only the ports that have been selected as quick view ports (see <i>SET ACCESSIBLE PORTS</i> , page 30).
POWERED ON	Lists only the ports that have their attached computers powered on.
QUICK VIEW + POWERED ON	Lists only the ports that have been selected as quick view ports (see <i>SET QUICK VIEW PORTS</i> , page 30), and that have their attached computers powered on.

Double click the choice you want, or move the highlight bar to it, then press **[Enter]**. An icon appears before the choice to indicate that it is the currently selected one.

F3: SET

This function allows the administrator and each user to set up their own, individual, working environment. A separate profile for each is stored by the OSD and is activated according to the username provided during login.

To change a setting:

1. Double click it; or move the highlight bar to it, then press **[Enter]**.
2. After you select an item, a submenu with further choices appears. To make a selection, either double click it; or move the highlight bar to it, then press **[Enter]**. An icon appears before the selected choice to indicate which one it is. The settings are explained in the following table:

Setting	Function
OSD HOTKEY	Selects which hotkey activates the OSD function: [Scroll Lock] [Scroll Lock] or [Ctrl] [Ctrl] . Since the [Ctrl] key combination may conflict with programs running on the computers, the default is the [Scroll Lock] combination.
PORT ID DISPLAY POSITION	Allows you to position where the port ID appears on the monitor. The default is the upper left corner, but you can have it appear anywhere on the screen. Use the mouse or the arrow keys to position the port ID display, then click or press [Enter] to lock the position and return to the Set submenu.
PORT ID DISPLAY DURATION	Determines how long a port ID displays on the monitor after a port change has taken place. The choices are: User Defined – which lets you select the amount of time (from 1–255 sec.); and Always On – which displays the port ID at all times. If you select <i>User Defined</i> , key in the number of seconds, then press [Enter] . The default is 3 Seconds. A setting of 0 (zero) disables this function.

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Setting	Function
PORT ID DISPLAY MODE	Selects how the port ID is displayed: the port number alone (PORT NUMBER); the port name alone (PORT NAME); or the port number plus the port name (PORT NUMBER + PORT NAME). The default is PORT NUMBER + PORT NAME .
SCAN DURATION	Determines how long the focus dwells on each port as it cycles through the selected ports in Auto Scan mode (see <i>F7 SCAN</i> , page 33). Key in a value from 1–255 seconds, then press [Enter] . Default is 5 seconds; a setting of 0 disables the scan function.
SCAN/SKIP MODE	<p>Selects which computers will be accessed under Skip mode (see <i>F5 SKP</i>, page 31), and Auto Scan mode (see <i>F7 SCAN</i>, page 33). Choices are:</p> <p>ALL – All the ports which have been set accessible (see <i>SET ACCESSIBLE PORTS</i>, page 30);</p> <p>QUICK VIEW – Only those ports which have been set accessible and have been selected as quick view ports (see <i>SET QUICK VIEW PORTS</i>, page 30);</p> <p>POWERED ON – Only those ports which have been set accessible and are powered on;</p> <p>QUICK VIEW + POWERED ON – Only those ports which have been set accessible and have been selected as quick view ports and are powered on. The default is ALL.</p>
SCREEN BLANKER	If there is no input from the console for the amount of time set with this function, the screen is blanked. Key in a value from 1–30 minutes, then press [Enter] . A setting of 0 disables this function. The default is 0 (disabled).
HOTKEY COMMAND MODE	Enables / Disables the <i>Hotkey Command</i> function. If the hotkey combinations conflict with programs running on the computers, you may want to disable hotkey operation by turning <i>Hotkey Command</i> mode Off. The default is ON, which allows hotkey operation of the switch.

F4: ADM

F4 is an administrator only function. It allows the administrator to configure and control the overall operation of the OSD. To change a setting, double click it; or use the up and down arrow keys to move the highlight bar to it then press **[Enter]**.

After you select an item, a submenu with further choices appears. Double click an item, or move the highlight bar to it then press **[Enter]**. An icon appears before the selected item to indicate which one it is. . The settings are explained in the following table:

Setting	Function
SET USERNAME AND PASSWORD	<p>This function is used to set usernames and passwords for the administrator and users:</p> <ul style="list-style-type: none"> ◆ One administrator and four user passwords can be set. ◆ After you select the administrator field or one of the user fields, a screen that allows you to key in your username and password appears. The username and password may be up to 15 characters long, and can consist of any combination of letters and numbers (A–Z, 0–9). ◆ For each individual, key in the username and password, then press [Enter]. ◆ To modify or delete a previous username or password, use the backspace key to erase individual letters or numbers.
SET LOGOUT TIMEOUT	<p>If there is no input from the console for the amount of time set with this function, the operator is automatically logged out. A login is necessary before the console can be used again.</p> <p>This enables other operators to gain access to the computers when the original operator is no longer accessing them, but has forgotten to log out. To set the timeout value, key in a number from 1–180 minutes, then press [Enter]. If the number is 0 [zero], this function is disabled. Default is 0 (disabled).</p>

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Setting	Function
EDIT PORT NAMES	<p>To help remember which computer is attached to a particular port, every port can be given a name. This function allows the administrator to create, modify, or delete port names. To edit a port name:</p> <ol style="list-style-type: none"> 1. Click the port you want, or use the navigation keys to move the highlight bar to it, then press [Enter]. 2. Key in the new port name, or modify/delete the old one. The maximum number of characters allowed for the port name is 12. Legal characters include: <ul style="list-style-type: none"> ◆ Alpha characters: A–Z ◆ All numeric characters: 0–9 ◆ + - / . and Space <p>Case does not matter; the OSD displays the port name in all capitals no matter how they were keyed in.</p> 3. When you have finished editing, press [Enter] to have the change take effect. To abort the change, press [Esc].
RESTORE DEFAULT VALUES	<p>This function is used to undo all changes and return the setup to the original factory default settings (see <i>OSD Factory Default Settings</i>, page 59) – except for the <i>Names</i> settings that were assigned to the ports, which are saved.</p>
CLEAR THE NAME LIST	<p>This function clears the port name list.</p>
ACTIVATE BEEPER	<p>Choices are Y (for Yes), or N (for No). When activated, the beeper sounds whenever a port is changed; when activating the Auto Scan function (see <i>F7 SCAN</i>, page 33); or an invalid entry is made on an OSD menu. The default is Y (activated).</p>

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Setting	Function
SET QUICK VIEW PORTS	<p>This function lets the administrator select which ports to include as quick view ports.</p> <ul style="list-style-type: none"> ◆ To select/deselect a port as a quick view port, use the navigation keys to move the highlight bar to it, then press the [Spacebar]. ◆ When a port has been selected as a quick view port, an arrowhead displays in the QV column of the list on the main screen. When a port is deselected, the arrowhead disappears. ◆ If one of the quick view options is chosen for the list view (see <i>F2 LIST</i>, page 25), only a port that has been selected here will display on the list. ◆ If one of the quick view options is chosen for auto scanning (see <i>SCAN/SKIP MODE</i>, page 27), only a port that has been selected here will be auto scanned. <p>The default is for no ports to be selected.</p>
SET ACCESSIBLE PORTS	<p>This function allows the administrator to define user access to the computers on the installation on a port-by-port basis.</p> <p>For each user, select the target port; then press the [Spacebar] to cycle through the choices: F (Full access), V (View only), or blank. Repeat until all access rights have been set, then press [Enter]. The default is F for all users on all ports.</p> <p>Note: A blank setting means that no access rights are granted. The port will not show up on the user's list on the main screen.</p>
RESET STATION IDS	<p>If you change the position of one of the stations in the daisy chain, the OSD settings will no longer correspond to the new situation. This function directs the OSD to rescan the station positions of the entire installation and updates the OSD so that the OSD station information corresponds to the new physical layout.</p> <p>Note: Only the station numbers get updated. Except for the port names, all administrator settings (such as set accessible ports, set quick view ports, etc.), for all of the computers affected by the change, have to be manually redone.</p>
FIRMWARE UPGRADE	<p>In order to upgrade the CL1008 / CL1016's firmware (see Chapter 6), you must first enable <i>Firmware Upgrade Mode</i> with this setting.</p> <p>When you bring up this menu, the current firmware version levels display. Select Y to enable <i>Firmware Upgrade</i> mode, or N to leave this menu without enabling it.</p>

F5: SKP

This function enables you to easily skip backward or forward, switching the KVM focus, from the currently active computer port to the previous or next available one.

- ◆ The selection of which computers are available for *Skip* mode switching is made with the *Scan/Skip* mode setting under the **F3 SET** function (see page 26).
- ◆ When you are in *Skip* mode, press:
 - ← To skip from the current port to the previous port in the list.
 - To skip from the current port to the next port in the list.
 - ↑ To skip from the current port to the last port of the previous station in the list.
 - ↓ To skip from the current port to the first port of the next station in the list.

Note: When you skip ports, you only skip to the previous or next available computer that is in the *Scan/Skip* mode selection (see page 27).

- ◆ If a port has been selected for *Scan/Skip* mode, when the focus switches to that port a left/right triangle symbol appears before its port ID display.
- ◆ While *Skip* mode is in effect, the console will not function normally. You must exit *Skip* mode in order to regain control of the console.
- ◆ To exit *Skip* mode, press [**Spacebar**] or [**Esc**].

F6: BRC

F6 is an administrator only function. When this function is in effect, commands sent from the console are broadcast to all available computers on the installation.

This function is particularly useful for operations that need to be performed on multiple computers, such as performing a system wide shutdown, installing or upgrading software, etc.

- ◆ While *BRC* mode is in effect:
 - ◆ A speaker symbol appears before the port ID display of the port that currently has the console focus.
 - ◆ The mouse will not function normally. You must exit *BRC* mode in order to regain control of the mouse.
- ◆ To exit *BRC* mode, invoke the OSD (with the OSD hotkey), then press **[F6]**, to turn *BRC* mode off.

F7: SCAN

This function allows you to automatically switch among the available computers at regular intervals so that you can monitor their activity without having to take the trouble of switching yourself.

- ◆ The selection of computers to be included for auto scanning is made with the *Scan/Skip* mode setting under the **F3 SET** function (see page 26).
- ◆ The amount of time that the focus stays on each port is set with the *Scan Duration* setting under the **F3 SET** function (see page 26).
- ◆ As each computer is accessed, an ‘S’ appears in front of the port ID display to indicate that it is being accessed under *Auto Scan* mode.
- ◆ While you are in *Auto Scan* mode, you can pause the scanning in order to keep the focus on a particular computer either by pressing **P**, or with a left click of the mouse. To resume scanning, press any key or left click, again. See *Invoking Auto Scan*, p. 37, for further details.
- ◆ To exit *Auto Scan* mode and stay at a particular location, press **[Spacebar]**. If the scanning stops on an empty port, or one where the computer is attached but is powered off, the monitor screen will be blank and the mouse and keyboard will have no effect. Simply wait – after the *Scan Duration* time is up, the scan function will move on to the next port.
- ◆ While *Auto Scan* mode is in effect, the console will not function normally. You must exit *Auto Scan* mode in order to regain control of the console.
- ◆ To exit *Auto Scan* mode, press **[Spacebar]** or **[Esc]**.

F8: LOUT

Clicking the **F8** field, or pressing [**F8**] logs you out of the OSD, and blanks the console screen. This is different from simply pressing [**Esc**] to deactivate the OSD when you are at the main screen.

With this function you must log in all over again to regain access to the OSD, whereas with [**Esc**], all you have to do to reenter the OSD is tap the OSD hotkey.

-
- Note:**
1. When you reenter the OSD after logging out, the screen stays blank except for the OSD main screen. You must input your password before you can continue.
 2. If you reenter the OSD after logging out, and immediately use [**Esc**] to deactivate the OSD without having selected a port from the OSD menu, a null port message displays on the screen. The OSD hotkey will bring up the main OSD screen.
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Chapter 5

Hotkey Operation

Hotkey Port Access

Hotkey port access allows you to provide the KVM focus to a particular port directly from the keyboard. The CL1008 / CL1016 provides three hotkey port access features:

- ◆ Selecting the Active Port
- ◆ Auto Scanning
- ◆ Skip Mode Switching

Note: The hotkey function must be enabled in the settings. See *HOTKEY COMMAND MODE*, p. 27 for details.

Invoking Hotkey Mode

All hotkey operations begin by invoking *Hotkey* mode. There are two methods that can be used to invoke Hotkey Mode. The first is to tap the **Hotkey** key on the keyboard (see *Dedicated Invocation Keys*, page 60). The second is to use a keyboard sequence.

To invoke Hotkey mode with the keyboard sequence, do the following:

1. Hold down the [**Num Lock**] key
2. Press and release the [**Minus**] key
3. Release the [**Num Lock**] key

Exiting Hotkey Mode

Press [**Esc**] to exit *Hotkey* mode.

Hotkey Mode Operation

Hotkey Mode Characteristics

When Hotkey Mode is active:

- ◆ The Caps Lock, and Scroll Lock LEDs flash in succession to indicate so. They stop flashing and revert to normal status when you exit *Hotkey* mode.
- ◆ A Command Line appears on the monitor screen. The command line prompt is the word *Hotkey*: in white text on a blue background, and displays the subsequent hotkey information that you key in.
- ◆ Ordinary keyboard and mouse functions are suspended – only hotkey compliant keystrokes and mouse clicks (described in the sections that follow), can be input. You must exit *Hotkey* mode (see p. 35) in order to regain normal control of the console.

Selecting the Active Port

Each KVM port is assigned a unique Port ID (see *Port ID Numbering*, page 19). You can directly access any computer on the installation with a hotkey combination that specifies the port ID of the KVM port that the computer is connected to. The steps involved are:

1. Invoke *Hotkey* mode (see page 35).

2. Key in the port ID

The port ID numbers display on the command line as you key them in. If you make a mistake, use **[Backspace]** to erase the wrong number.

3. Press **[Enter]**

After you press [Enter], the KVM focus switches to the designated computer and you automatically exit *Hotkey* mode.

Auto Scan Mode

Auto Scan automatically switches among all the active KVM ports that are accessible to the currently logged in user at regular intervals, allowing automatic monitoring of computer activity. (See *Scan/Skip Mode* of the OSD **F3: SET** function, page 26 for information regarding accessible ports.)

Setting the Scan Interval

The amount of time *Auto Scan* dwells on each port is set with the *Scan Duration* setting of the OSD **F3 SET** function (see page 26). You can change the scan interval before activating hotkey auto scanning, if you wish, with the following hotkey combination:

1. Invoke *Hotkey* mode (see page 35).
2. Key in **[T] [n]**

Where **[T]** is the letter **T**, and **[n]** is a number from 1–255 that represents the number of seconds the system dwells on a port before going on to the next.

The letter **T** and the numbers display on the command line as you key them in. If you make a mistake, use **[Backspace]** to erase the wrong number.

3. Press **[Enter]**

After you press **[Enter]**, you automatically exit *Hotkey* mode, and are ready to invoke auto scanning.

Invoking Auto Scan

To start auto scanning, key in the following hotkey combination:

1. Invoke *Hotkey* mode (see page 35).
2. Press **[A]**.

When you press **A**, you automatically exit *Hotkey* mode; enter *Auto Scan* mode; and auto scanning begins.

While *Auto Scan* mode is in effect, ordinary keyboard and mouse functions are suspended - only *Auto Scan* mode compliant keystrokes and mouse clicks can be input. You must exit *Auto Scan* mode (see p. 38) in order to regain normal control of the console.

Pausing Auto Scan

While you are in *Auto Scan* mode, you can pause the scanning in order to keep the focus on a particular computer either by pressing **P** or with a left click of the mouse. During the time that auto scanning is paused, the command line displays: **Auto Scan: Paused.**

Pausing when you want to keep the focus on a particular computer is more convenient than exiting *Auto Scan* mode because when you resume scanning, you start from where you left off.

If you exit *Auto Scan* mode, on the other hand, when you restart scanning, you start over from the beginning with the very first computer on the installation.

To resume auto scanning after pausing, press any key or left click. Scanning continues from where it left off.

Exiting AutoScan Mode

To exit *Auto Scan* mode press [Esc] or [Spacebar]. Auto scanning stops when you exit *Auto Scan* mode.

Skip Mode

This feature allows you to switch between computers in order to monitor them manually. You can dwell on a particular port for as long or as little as you like, as opposed to auto scanning, which automatically switches after a fixed interval. To invoke Skip Mode, key in the following hotkey combination:

1. Invoke *Hotkey* mode (see page 35).
2. Key in **[Arrow]**
 - ◆ Where [Arrow] refers to one of the arrow keys. After you press [Arrow], you automatically exit *Hotkey* mode, and enter Skip Mode where you can switch ports as follows:

←	Skips from the current port to the first accessible port previous to it. (See <i>SCAN/SKIP MODE</i> , p. 27, for information regarding accessible ports.)
→	Skips from the current port to the next accessible port.
↑	Skips from the current port to the last accessible port of the previous station. If you are at a port on the first station you cycle backward to the last accessible port on the last station.
↓	Skips from the current port to the first accessible port of the next station. If you are at a port on the last station you cycle forward to the first accessible port on the first station.

- ◆ Once you are in Skip Mode, you can keep on skipping by pressing the arrow keys. You don't have to invoke *Hotkey* mode again.
 - ◆ While Skip Mode is in effect, ordinary keyboard and mouse functions are suspended – only Skip Mode compliant keystrokes can be input. You must exit Skip Mode in order to regain normal control of the console.
3. To exit Skip Mode, press **[Esc]** or **[Spacebar]**.

Hotkey Beeper Control

The beeper can be hotkey toggled on and off (see *ACTIVATE BEEPER*, page 29). To toggle the beeper, key in the following hotkey combination:

1. Invoke *Hotkey* mode (see page 35).
2. Press [B]

After you press **B**, the beeper toggles on or off. The command line displays *Beeper On* or *Beeper Off* for one second; then the message disappears and you automatically exit *Hotkey* mode.

Hotkey Summary Table

[Num Lock] + [-]	[Port ID] [Enter]	Switches the KVM focus to the computer that corresponds to that port ID
	[T] [n] [Enter]	Sets the <i>Auto Scan</i> interval to n seconds – where n is a number from 1–255.
	[A]	Invokes <i>Auto Scan</i> mode. <ul style="list-style-type: none"> ◆ When <i>Auto Scan</i> mode is in effect, [P] or left click pauses auto scanning. ◆ When auto scanning is paused, pressing P or left clicking again resumes auto scanning. <p>Note: Pressing almost any of the typewriter keys (letters, numbers, Enter, Esc, Spacebar, etc.), will resume scanning.</p>
	[←]	Skips from the current port to the first accessible port previous to it. (See <i>SCAN/SKIP MODE</i> , p. 27, for information regarding accessible ports.)
	[→]	Skips from the current port to the next accessible port.
	[↑]	Skips from the current port to the last accessible port of the previous station. If you are at a port on the first station you cycle backward to the last accessible port on the last station.
	[↓]	Skips from the current port to the first accessible port of the next station. If you are at a port on the last station you cycle forward to the first accessible port on the first station.
	[B]	Toggles the beeper on or off.

Chapter 6

The Firmware Upgrade Utility

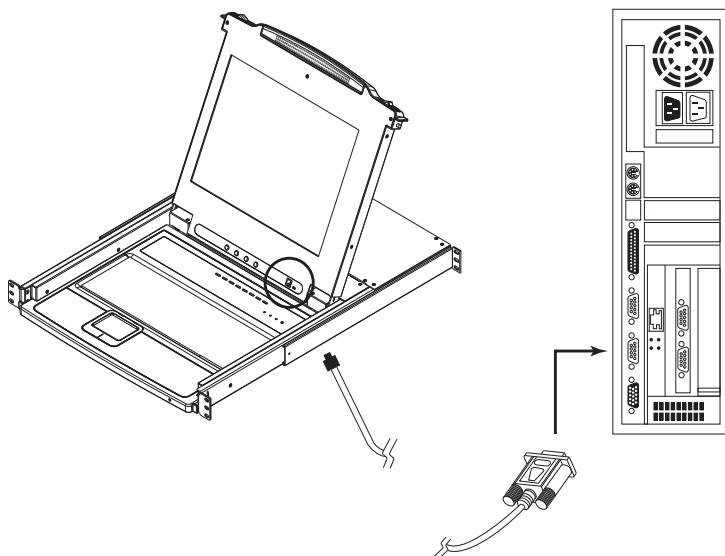
The Windows-based *Firmware Upgrade Utility* (FWUpgrade.exe) provides a smooth, automated process for upgrading the KVM switch's firmware.

The utility comes as part of a *Firmware Upgrade Package* that is specific for each device. New firmware upgrade packages are posted on our web site as new firmware revisions become available. Check the web site regularly to find the latest packages and information relating to them.

Preparation

To prepare for the firmware upgrade, do the following:

1. From a computer that is not part of your KVM installation go to our Internet support site and choose the model name that relates to your device to get a list of available firmware upgrade packages.
2. Choose the firmware upgrade package you want to install (usually the most recent), and download it to your computer.
3. Use the *Firmware Upgrade Cable* (provided with this unit), to connect a COM port on your computer to the *Firmware Upgrade Port* of the switch.



4. Shut down all of the computers, but not the stations, on your KVM installation.
5. From your KVM switch console, bring up the OSD (see p. 21) and select the **F4 ADM** function.
6. Scroll down to FIRMWARE UPGRADE. Press [**Enter**], then press [**Y**] to invoke *Firmware Upgrade* mode (see p. 30) For your reference, the current firmware upgrade version displays on the screen.

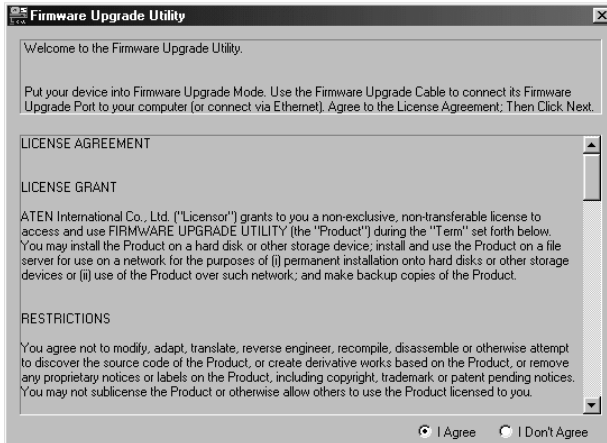
Note: On a daisy chained installation, the chained stations will automatically receive the upgrade via the daisy chain cables.

Starting the Upgrade

To upgrade your firmware:

1. Run the downloaded firmware upgrade package file, either by double clicking the file icon, or by opening a command line and entering the full path to it.

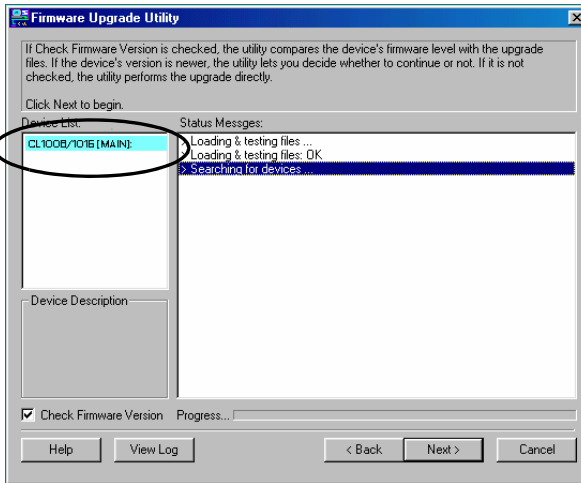
The firmware upgrade utility *Welcome* screen appears:



Note: The screens shown in this section are for reference only. The wording and layout of the actual screens put up by the firmware upgrade utility may vary slightly from these examples.

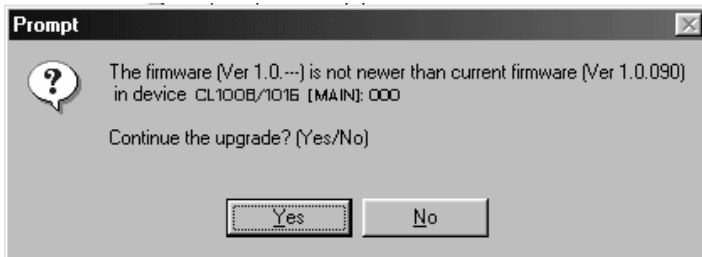
2. Read and *Agree* to the license agreement (enable the I Agree radio button).
3. Click **Next** to continue.

The firmware upgrade utility main screen appears:



The utility inspects your installation. The devices capable of being upgraded are listed in the *Device List* panel.

4. After all the devices have been listed, click **Next** to perform the upgrade.
 - ◆ If you enabled *Check Firmware Version*, the utility compares the device's firmware level with that of the upgrade files. If it finds that the device's version is higher than the upgrade version, it brings up a dialog box informing you of the situation and gives you the option to continue or cancel.



If you didn't enable *Check Firmware Version*, the utility installs the upgrade files without checking whether they are a higher level, or not.

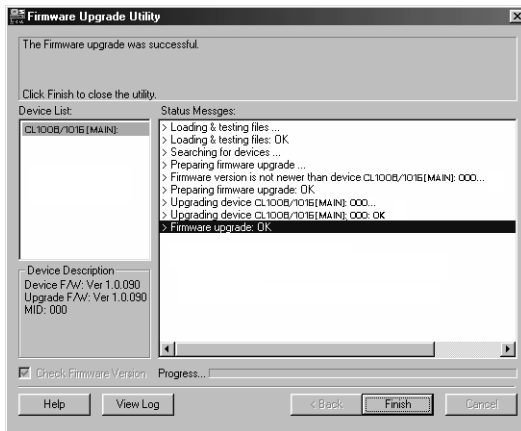
- ◆ As the upgrade proceeds status messages appear in the *Status Messages* panel, and the progress toward completion is shown on the *Progress* bar.
- ◆ To abort the upgrade procedure before it completes, click **Cancel**.

If you cancel before completion, a dialog box appears warning you that quitting at this point may cause the device's firmware to be lost, and you are given the option to proceed or abort the cancel operation.

To recover from a "lost firmware" situation, see *Firmware Upgrade Recovery*, page 46.

Upgrade Succeeded

After the upgrade has completed, a screen appears to inform you that the procedure was successful:



Click **Finish** to close the firmware upgrade utility.

Upgrade Failed

If the *Upgrade Succeeded* screen doesn't appear, it means that the upgrade failed to complete successfully. See the next section, *Firmware Upgrade Recovery*, for how to proceed.

Firmware Upgrade Recovery

There are basically three conditions that call for firmware upgrade recovery:

- ◆ When you invoke *Firmware Upgrade* mode (see *Preparation*, page 41), but decide not to proceed with the upgrade.
- ◆ When the mainboard firmware upgrade fails.
- ◆ When the I/O firmware upgrade fails.

To perform a firmware upgrade recovery, do the following:

1. Power off the switch. If it is part of a daisy chain, disconnect it from the chain.
2. Connect the *Firmware Upgrade Cable* to its *Firmware Upgrade Port*.
3. Slide the *Firmware Upgrade Recovery Switch* to the **Recover** position.
4. Power the switch back on and repeat the upgrade procedure.
5. After the switch has been successfully upgraded, power it off, and slide the *Firmware Upgrade Recovery Switch* back to the **Normal** position.
6. If the switch is part of a daisy chain, replace it in the chain.
7. Power the switch back on.

Safety Instructions

General

- ◆ Read all of these instructions. Save them for future reference.
- ◆ Follow all warnings and instructions marked on the device.
- ◆ To prevent damage to your installation it is important that all devices are properly grounded.
- ◆ 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.
- ◆ 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.

- ◆ 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).
- ◆ 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.
- ◆ 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.
- ◆ Do not connect the RJ-11 connector marked “UPGRADE” to a public telecommunication network.

Rack Mounting

- ◆ Before working on the rack, make sure that the stabilizers are secured to the rack, extended to the floor, and that the full weight of the rack rests on the floor. Install front and side stabilizers on a single rack or front stabilizers for joined multiple racks before working on the rack.
- ◆ Always load the rack from the bottom up, and load the heaviest item in the rack first.
- ◆ Make sure that the rack is level and stable before extending a device from the rack.
- ◆ Use caution when pressing the device rail release latches and sliding a device into or out of a rack; the slide rails can pinch your fingers.
- ◆ After a device is inserted into the rack, carefully extend the rail into a locking position, and then slide the device into the rack.
- ◆ Do not overload the AC supply branch circuit that provides power to the rack. The total rack load should not exceed 80 percent of the branch circuit rating.
- ◆ Make sure that all equipment used on the rack – including power strips and other electrical connectors – is properly grounded.
- ◆ Ensure that proper airflow is provided to devices in the rack.
- ◆ Ensure that the operating ambient temperature of the rack environment does not exceed the maximum ambient temperature specified for the equipment by the manufacturer
- ◆ Do not step on or stand on any device when servicing other devices in a rack.
- ◆ **Caution:** Slide/rail (LCD KVM) mounted equipment is not to be used as a shelf or a work space.



Technical Support

International

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

North America

Email Support		support@aten-usa.com
Online Technical Support	Troubleshooting Documentation Software Updates	http://www.aten-usa.com/support
Telephone Support		1-888-999-ATEN ext 4988

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

CL1008

Function		CL1008	
Computer Connections	Direct	8	
	Max	128 (via Daisy Chain)	
Console Connections		1	
Port Selection		OSD; Hotkey; Pushbutton Switches	
Connectors	KVM Ports	8 x SPHD-15 Female (Yellow)	
	Daisy Chain	1 x DB-25 Male (Black)	
	FW Upgrade	1 x RJ-11 Female	
	Power	1 x 3-prong AC socket	
Switches	Reset	1 x Semi-recessed pushbutton	
	Power	1 x Rocker	
	F/W Upgrade.	1 x Slide	
	LCD Adjust	4 x Pushbutton	
	Port Selection	8 x Pushbutton	
LEDs	On Line	8 (Orange)	
	Selected	8 (Green)	
	Power	1 (Dark Green)	
	Lock	Num	1 (Green)
		Caps	1 (Green)
Scroll		1 (Green)	
Emulation	Keyboard / Mouse	PS/2	
Video		1280 x 1024 @ 75 Hz; DDC2B	
Scan Interval (OSD Select)		1–255 secs.	
I/P Rating		100–240V AC; 50/60Hz; 1A	
Power Consumption		120V, 23W; 230V, 25W	
Environment	Operating Temp.	0–40° C	
	Storage Temp.	-20–60° C	
	Humidity	0–80% RH non-condensing	
Physical Properties	Housing	Metal + Plastic	
	Weight	13.10 kg	
	Dimensions (L x W x H)	63.40 x 48.00 x 4.40 cm (19"/1U)	

CL1016

Function		CL1016	
Computer Connections	Direct	16	
	Max	256 (via Daisy Chain)	
Console Connections		1	
Port Selection		OSD; Hotkey; Pushbutton Switches	
Connectors	KVM Ports	16 x SPHD-15 Female (Yellow)	
	Daisy Chain	1 x DB-25 Male (Black)	
	FW Upgrade	1 x RJ-11 Female	
	Power	1 x 3-prong AC socket	
Switches	Reset	1 x Semi-recessed pushbutton	
	Power	1 x Rocker	
	F/W Upgrade.	1 x Slide	
	LCD Adjust	4 x Pushbutton	
	Port Selection	16 x Pushbutton	
LEDs	On Line	16 (Orange)	
	Selected	16 (Green)	
	Power	1 (Dark Green)	
	Lock	Num	1 (Green)
		Caps	1 (Green)
Scroll		1 (Green)	
Emulation	Keyboard / Mouse	PS/2	
Video		1280 x 1024 @ 75 Hz; DDC2B	
Scan Interval (OSD Select)		1–255 secs.	
I/P Rating		100–240V AC; 50/60Hz; 1A	
Power Consumption		120V, 26W; 230V, 28W	
Environment	Operating Temp.	0–40° C	
	Storage Temp.	-20–60° C	
	Humidity	0–80% RH Non-condensing	
Physical Properties	Housing	Metal + Plastic	
	Weight	13.30 kg	
	Dimensions (L x W x H)	63.40 x 48.00 x 4.40 cm (19"/1U)	

Connection Tables

The following tables indicate the relationship between the number of units and the number of computers that they control on a daisy chained installation:

CL1008 – ACS1208A

No.	Computers	No.	Computers
1	1–8	9	65–72
2	9–16	10	73–80
3	17–24	11	81–88
4	25–32	12	89–96
5	33–40	13	97–104
6	41–48	14	105–112
7	49–56	15	113–120
8	57–64	16	121–128

CL1008 – ACS1216A

No.	Computers	No.	Computers
1	1–8	9	121–136
2	9–24	10	137–152
3	25–40	11	152–168
4	41–56	12	169–184
5	57–72	13	185–200
6	73–88	14	201–216
7	89–104	15	217–232
8	105–120	16	233–248

CL1016 – ACS1208A

No.	Computers	No.	Computers
1	1–16	9	73–80
2	17–24	10	81–88
3	25–32	11	89–96
4	33–40	12	97–104
5	41–48	13	105–112
6	49–56	14	113–120
7	57–64	15	121–128
8	65–72	16	129–136

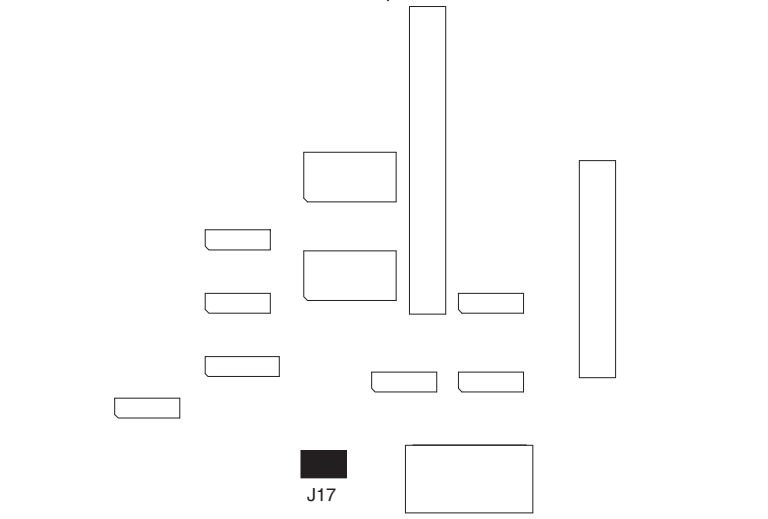
CL1016 – ACS1216A

No.	Computers	No.	Computers
1	1–16	9	129–144
2	17–32	10	145–160
3	33–48	11	161–176
4	49–64	12	177–192
5	65–80	13	193–208
6	81–96	14	209–224
7	97–112	15	225–240
8	113–128	16	241–256

Clear Login Information

If you are unable to perform an Administrator login (because the username and password information has become corrupted, or you have forgotten it, for example), you can clear the login information with the following procedure:

1. Power off the switch and remove the top cover from the unit chassis.
2. Short the jumper labeled *Default Password* on the switch's main board



3. Power on the switch.

When you power the switch on, the following message appears on the LCD display:

```
USERNAME AND PASSWORD INFORMATION HAS BEEN CLEARED.  
PLEASE POWER OFF THE SWITCH, REMOVE THE JUMPER, CLOSE  
THE CASE, THEN RESTART.
```

4. After you start back up, the OSD login function acts exactly the way it did the first time the switch was run (see *OSD Overview*, page 21) and you can reset passwords for the administrators and users.

Optional Rack Mounting

For convenience and flexibility, three optional rack mounting kits are available:

- ◆ A long bracket standard rack mounting kit for 68.0–110.0 cm racks;
- ◆ A short bracket Easy-Installation rack mount kit for 52.0–70.0 cm racks;
- ◆ A long bracket Easy-Installation rack mount kit for 68.0–110.0 cm racks.

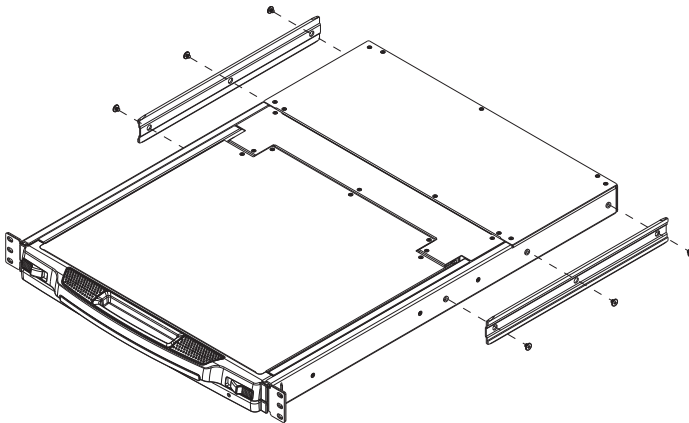
Standard - Long

To install the long bracket standard rack mount kit, simply replace the short L brackets on the standard rack mount kit with the long ones, and mount the switch according to the instructions given for *Standard Rack Mounting*, page 7.

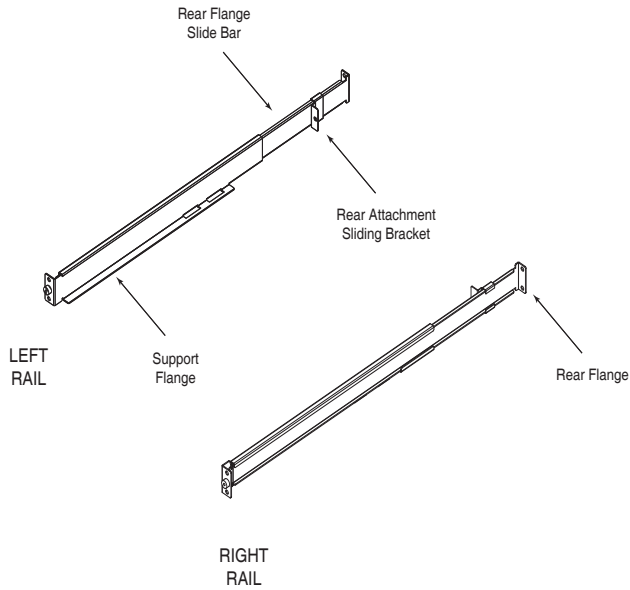
Easy Installation

With an *Easy-Installation* kit, one person can mount the switch. To install the *Easy-Installation* kit, do the following:

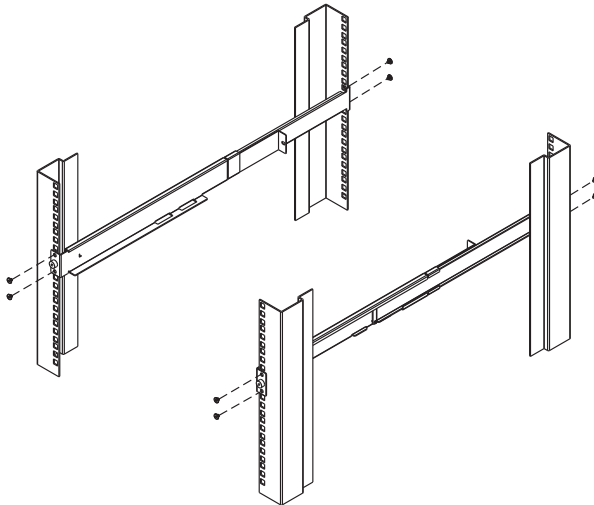
1. Remove the standard L brackets, and the side mounting brackets from both sides of the switch.



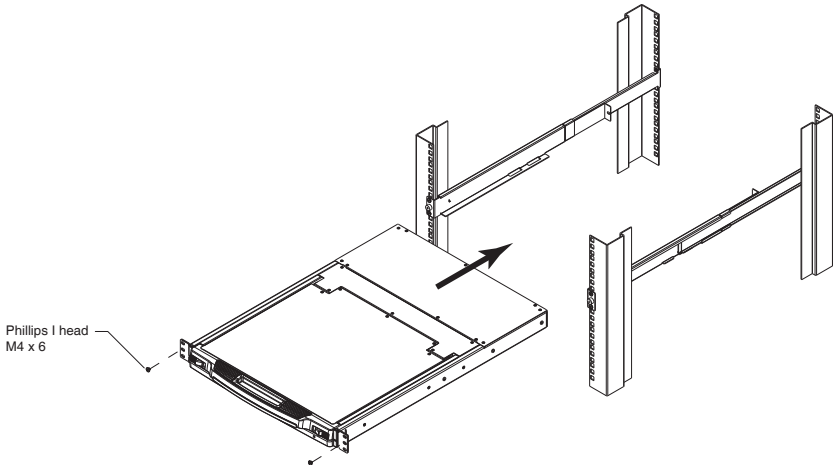
2. Attach the left and right *easy-installation* mounting rails to the inside of the rack. The flange that supports the switch will be to the inside.



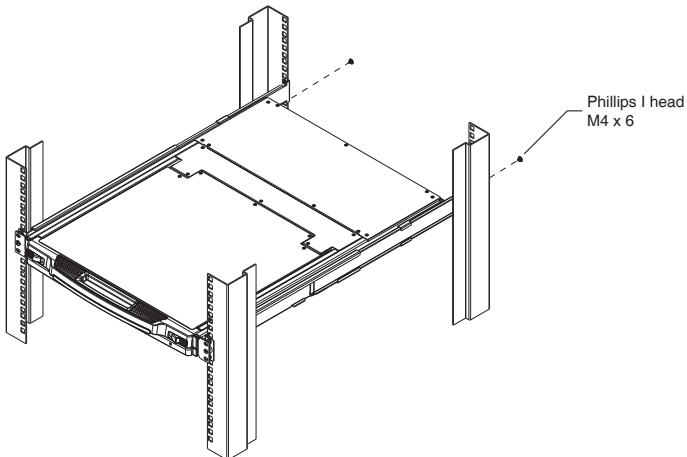
- a) Screw the front flanges to the rack first.
- b) Slide the bars with the rear flanges toward the rack until the flanges make contact with the rack, then screw the rear flanges to the rack.



- Slide the switch onto the support flanges. Use the screws supplied with this package to loosely attach the front of the switch to the front of the rack (only tighten the screws part way).



- Slide the rear attachment sliding brackets along the slide bars until they contact the rear of the switch, then use the screws supplied with this package to attach the bars to the rear of the switch (tighten the screws all the way).



5. Slide the switch open and closed a couple of times to be sure that it is properly aligned and operating smoothly. (See page 13 for opening and closing procedures.)
6. After determining that the switch is properly lined up and operating correctly, finish up by fully tightening down the partially tightened front attachment screws inserted in step 3.

OSD Factory Default Settings

The factory default settings are as follows:

Setting	Default
OSD Hotkey	[Scroll Lock] [Scroll Lock]
Port ID Display Position	Upper Left Corner
Port ID Display Duration	3 Seconds
Port ID Display Mode	The Port Number plus the Port Name
Scan Duration	5 Seconds
Scan/Skip Mode	All
Screen Blanker	0 (Disabled)
Logout Timeout	0 (Disabled)
Beeper	Y (Activated)
Accessible Ports	F (Full) For all Users on all Ports

Dedicated Invocation Keys

Two dedicated keys are provided on the keyboard module to make it easy to invoke Hotkey Mode and the OSD, as shown in the diagram, below



Note: These keys are toggles. Press once to invoke the feature, press again to exit.

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

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.

The direct vendor also reserves the right to revise or update the device or documentation without obligation to notify any individual or entity of such revisions, or update. For further inquiries, please contact your direct vendor.

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