



**Dual Rail USB HDMI DVI VGA LCD Console  
CL3800  
User Manual**



## EMC Information

---

**FEDERAL COMMUNICATIONS COMMISSION INTERFERENCE STATEMENT:** 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.

The device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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

**Warning:** Operation of this equipment in a residential environment could cause radio interference.

### KCC Statement

이 기기는 업무용 (A 급) 전자파 적합 기기로서 판매자 또는 사용자는 이 점을 주의하시기 바라며, 가정 외의 지역에서 사용하는 것을 목적으로 합니다.

## RoHS

---

This product is RoHS compliant.



---

## User Information

---

### Online Registration

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

---

International	<a href="http://eservice.aten.com">http://eservice.aten.com</a>
---------------	---

---

### Telephone Support

For telephone support, call this number:

---

International	886-2-8692-6959
China	86-400-810-0-810
Japan	81-3-5615-5811
Korea	82-2-467-6789
North America	1-888-999-ATEN ext 4988
United Kingdom	44-8-4481-58923

---

## **User Notice**

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

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

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

A typical LCD (Liquid Crystal Display) monitor has millions of pixels. A dead pixel refers to a pixel with a defect in its ability to display the correct color output. It most often looks like a tiny black or white spot on your screen, although it can be any other color. Since even a tiny dust particle on one of the pixels during the manufacturing process or a slight bump during shipping can create a dead pixel, the ISO 13406-2 norm defines 4 classes of acceptable screens with dead pixels--Class 1 is the best; Class 4 is the worst. Almost all manufacturers use Class 2 to establish their warranties, which allows a certain amount of dead pixels to exist before they will replace the screen. Since the manufacturers consider these screens to be acceptable under ISO specifications, we cannot be responsible for replacement or warranty of the TFT LCD panel.

## **Package Contents**

---

### **Basic Package**

The basic CL3800 package consists of:

- 1 CL3800 Dual Rail USB HDMI DVI VGA LCD Console with Standard Rack Mount Kit
- 1 USB HDMI KVM Cable Set
- 1 Firmware Upgrade Cable
- 1 Power Cord
- 1 User Instructions\*

### **Optional Equipment**

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

- ◆ Standard Rack Mount Kit – Long (2X-040G)
- ◆ Easy-Installation Rack Mount Kit – Short (2X-041G)
- ◆ Easy-Installation Rack Mount Kit – Long (2X-042G)

Check to make sure that all of the components are present and in good order. If anything is missing, or was damaged in shipping, contact your dealer.

Read this manual thoroughly and follow the installation and operation procedures carefully to prevent any damage to the console or to any other devices on the CL3800 installation.

---

\* Changes may have been made to the manual since it was published. Please visit our web site to download the most up-to-date version of the manual

---

© Copyright 2018 ATEN® International Co., Ltd.  
Manual Part No.  
Manual Date: 2018-03-01

ATEN and the ATEN logo are registered trademarks of ATEN International Co., Ltd. All rights reserved.  
All other brand names and trademarks are the registered property of their respective owners.

# Contents

---

EMC Information . . . . .	ii
RoHS . . . . .	ii
User Information . . . . .	iii
Online Registration . . . . .	iii
Telephone Support . . . . .	iii
User Notice . . . . .	iv
Package Contents . . . . .	v
Basic Package . . . . .	v
Optional Equipment . . . . .	v
About this Manual . . . . .	viii
Overview . . . . .	viii
Conventions . . . . .	ix
Product Information . . . . .	ix

## **Chapter 1.**

### **Introduction**

Overview . . . . .	1
Features . . . . .	2
Requirements . . . . .	3
LCD Console . . . . .	3
External Console . . . . .	3
Cables . . . . .	3
Operating Systems . . . . .	4
Components . . . . .	5
Front View . . . . .	5
Rear View . . . . .	7

## **Chapter 2.**

### **Hardware Setup**

Before you Begin . . . . .	9
Standard Rack Mounting . . . . .	10
Connecting Up . . . . .	12

## **Chapter 3.**

### **Operation**

Opening the Console . . . . .	15
Opening Separately . . . . .	15
Opening Together . . . . .	19
Operating Precautions . . . . .	20
LCD OSD Configuration . . . . .	21
LCD Buttons . . . . .	21
Adjustment Settings . . . . .	22
Hot Plugging . . . . .	23
Powering Off and Restarting . . . . .	23
Hotkeys . . . . .	24

---

**Chapter 4.****Firmware Upgrade**

The Firmware Upgrade Utility . . . . .	27
Before You Begin . . . . .	27
Firmware Upgrade Mode . . . . .	28
Performing the Upgrade . . . . .	29
Starting the Upgrade: . . . . .	29
Upgrade Succeeded: . . . . .	31
Upgrade Failed: . . . . .	32
Firmware Upgrade Recovery . . . . .	33
Exiting Firmware Upgrade Mode . . . . .	33

**Appendix**

Safety Instructions . . . . .	35
General . . . . .	35
Rack Mounting . . . . .	37
Technical Support . . . . .	38
International . . . . .	38
North America . . . . .	38
Specifications . . . . .	39
Optional Rack Mounting . . . . .	41
Sun Keyboard Emulation . . . . .	45
Mac Keyboard . . . . .	46
Troubleshooting . . . . .	47
Limited Warranty . . . . .	48

## About this Manual

---

This User Manual is provided to help you get the most from your CL3800 system. It covers all aspects of installation, configuration and operation. An overview of the information found in the manual is provided below.

### Overview

**Chapter 1, Introduction**, introduces you to the CL3800. Its purpose, features and benefits are presented, and its components are described.

**Chapter 2, Hardware Setup**, provides step-by-step instructions for setting up your installation, and explains some basic operation procedures.

**Chapter 3, Operation**, describes the fundamental concepts involved in operating the CL3800.

**Chapter 4, Firmware Upgrade**, explains how to upgrade the CL3800's firmware with the latest available versions.

**An Appendix**, provides specifications and other technical information regarding the CL3800.

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

This Page Intentionally Left Blank

# Chapter 1

## Introduction

### Overview

---

The CL3800 is a Short Depth 18.5" USB HDMI DVI VGA Dual Rail LCD Console that features an integrated FHD widescreen monitor with keyboard and touchpad in a 1U rack-mountable sliding housing. The CL3800 is the first short-depth dual rail LCD console that is specially design to fit in narrow rack shelves where space is limited. The CL3800 provides front end access to compatible KVM switches and utilizes space by closing flat and sliding into the rack. In addition, ports for an external USB keyboard and mouse as well as a monitor are provided on the rear panel.

The CL3800 features HDMI, DVI, and VGA ports for the KVM switch and external console's video connection. This added convenience provides three video options for both the external console and KVM switch connection. The CL3800 also includes two mini stereo ports for connecting audio speakers.

The short-depth design fits all 19" cabinets, and is especially suitable for shallow racks. In addition to saving valuable space on the rack, the CL3800 also provides a space-saving solution for special environments, such as outside broadcast vans (OB vans) and compact control rooms.

Server rooms already installed with compatible KVM switches will have the advantage of easy LCD access, an additional KVM console, and a built-in space saving sliding module, without having to purchase a new KVM switch.

The CL3800's firmware is upgradable, so you can stay current with the latest updates by downloading them from the ATEN website. Setup is fast and easy. Simply use the custom cable included with your device to connect the CL3800 to the console ports of your KVM switch and you are ready to go!

## Features

---

- ◆ Integrated LCD KVM console with 18.5" LED-backlit widescreen Full HD LCD monitor in a dual rail housing with top and bottom clearance for smooth operation in a 1U high system rack
- ◆ Exclusive LED illumination light – designed by ATEN to illuminate the keyboard and touchpad to allow visibility in low-light conditions
- ◆ Short-depth design allows you to work with your rack-mounting equipment in narrow spaces
- ◆ Dual rail design allows LCD monitor and keyboard/touchpad modules to operate independently
- ◆ Console lock – enables the console drawer to remain securely locked away in position when not in use
- ◆ Supports three types of video inputs – HDMI, DVI, and VGA\*
- ◆ 18.5" LCD screen with Full HD resolution of 1920 x 1080; external console supports 1920 x 1200
- ◆ Audio support for connecting speakers
- ◆ Supports an external console with USB / HDMI / VGA / DVI connectors\*
- ◆ Additional hot-pluggable USB mouse port on front panel (also functions as a USB peripheral port)
- ◆ Console selection via hotkey
- ◆ Standard 105-key keyboard
- ◆ Keyboard Language support: English (US), English (UK), French, German, German (Swiss), Greek, Hungarian, Italian, Japanese, Korean, Russian, Spanish, Swedish, Turkish, and Traditional Chinese
- ◆ Standard rack mount kit included
- ◆ Optional Easy Installation Rack Mounting Kit available\*\*
- ◆ No software required
- ◆ Firmware upgradable
- ◆ Supports hot-plugging

---

**Note:** 1. Only one video signal (HDMI, DVI-D, or VGA) can be displayed at time.

2. Easy Installation Rack Mounting Kit is sold separately. Contact your ATEN dealer for product information.

---

## Requirements

---

### LCD Console

- ◆ The LCD console supports most ATEN HDMI, DVI, and VGA KVM switches. If you are unsure whether your switch is supported or not, check with your dealer.
- ◆ The integrated LCD monitor's maximum resolution is 1920 x 1080 @ 60 Hz. Make sure that none of the resolution settings of the connected computers exceed the LCD monitor's maximum resolution.

### External Console

- ◆ A HDMI, DVI, or VGA monitor capable of displaying the highest resolution provided by any computer in the installation
- ◆ USB keyboard and mouse

### Cables

For optimum signal integrity and to simplify the layout, we strongly recommend that you use high quality custom cable sets available in varying lengths, described in the table below, which can be purchased from your dealer.

Length (m)	Type	Part Number
1.20	USB, VGA	2L-5301U
1.80	USB, VGA	2L-5302U
	USB, DVI	2L-7D02U
	USB, HDMI	2L-7D02UH
	USB, HDMI to DVI	2L-7D02DH
3.00	USB, VGA	2L-5303U
	USB, DVI	2L-7D03U
5.00	USB, VGA	2L-5305U
	USB, DVI	2L-7D05U

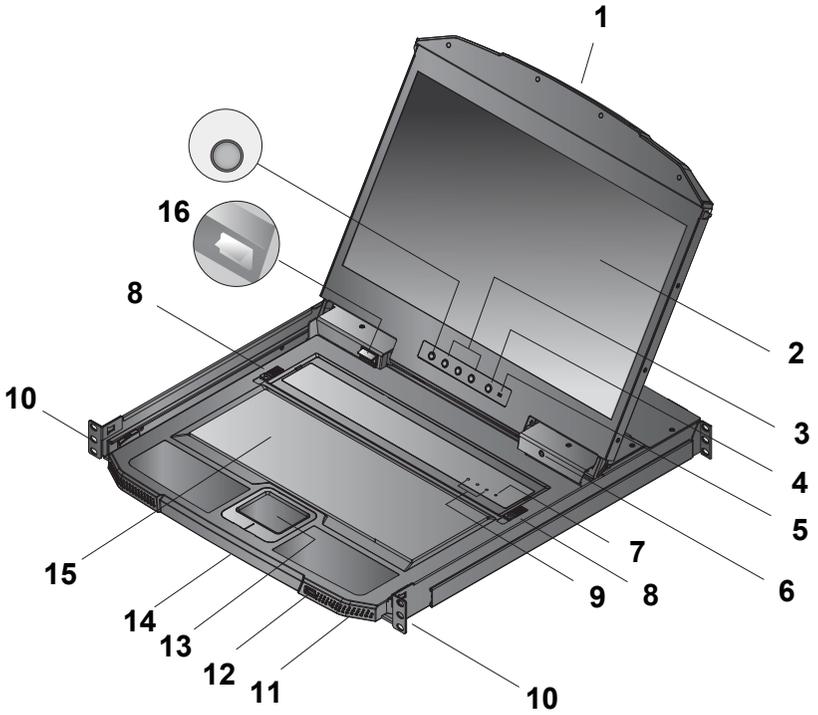
## **Operating Systems**

Supported operating systems are shown in the table, below.

<b>OS</b>		<b>Version</b>
Windows		NT and higher
Linux	RedHat	9.0 and higher
	SuSE	10 and higher
	Mandriva (Mandrake)	9.0 and higher
UNIX	AIX	4.3 and higher
	FreeBSD	5.5 and higher
	Sun	Solaris 8 and higher
Novell	Netware	5.0 and higher
Mac		9.0 and higher
DOS		6.2 and higher

# Components

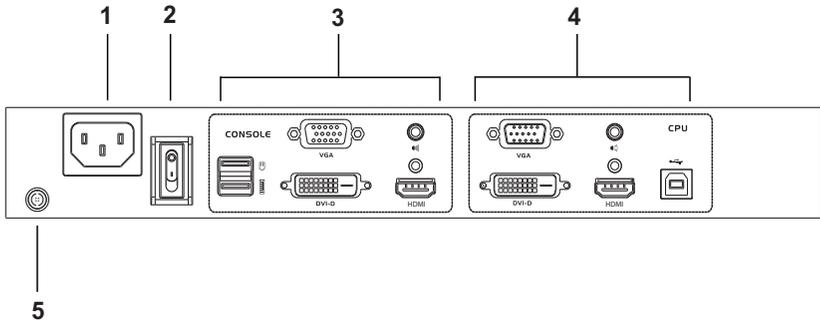
## Front View



No.	Component	Description
1	Upper Handle	Pull to slide the LCD module out; push to slide it in. See <i>Opening the Console</i> , page 15, for details on sliding the console in and out
2	LCD Module	After sliding the LCD module out, flip up the cover to access the LCD display.
3	LCD Controls	The buttons to control the position and picture settings of the LCD display are located here. See page 21, for details.
4	LCD On / Off Button	Push this button to turn the LCD monitor on and off. The button lights when the LCD monitor is off. <b>Note:</b> The light indicates that only the monitor is off, not the attached KVM switch.
5	Firmware Upgrade Switch	During normal operation and while performing a firmware upgrade, this switch should be in the NORMAL position. If a firmware upgrade operation does not complete successfully, this switch is used to perform a firmware upgrade recovery. See <i>Firmware Upgrade Recovery</i> , page 33, for details.
6	Firmware Upgrade Port	The firmware upgrade cable that transfers the firmware upgrade data from the administrator's computer plugs into this 3.5 mm audio jack.
7	Reset Switch	Located to the right of the Lock LEDs. Press this recessed switch in with a thin object to perform a system reset.
8	Keyboard Module Releases	These catches (one on each side) release the keyboard module so you can slide it away.
9	Lock LEDs	The Num Lock, Caps Lock, Scroll Lock LEDs are located here.
10	Rack Mounting Tabs	Rack mounting tabs are located at each corner of the unit. See <i>Standard Rack Mounting</i> , page 10, for details.
11	Power LED	Lights (green) to indicate that the unit is receiving power.
12	USB Port	The USB port is available to connect a USB peripheral device (flash drive, CD-ROM drive, etc.) to the console, or a USB mouse for users who prefer to use an external mouse.
13	Touchpad	Standard mouse touchpad
14	Bottom Handle	Pull to slide the keyboard module out. See <i>Opening the Console</i> , page 15, for details on sliding the console in and out.
15	Keyboard Module	Standard 105-key keyboard.
16	LED Illumination Light	Press the Exit/Light pushbutton for two seconds to turn the LED light ON or Off. (Default: On)

---

## Rear View



No.	Component	Description
1	Power Socket	This is a standard 3 prong AC power socket. The power cord from an AC source plugs in here.
2	Power Switch	This is a standard rocker switch that powers the CL3800 on and off.
3	External Console Section	For flexibility and convenience, the CL3800 supports an independent, external, KVM console. The external console's USB keyboard and mouse, HDMI, DVI, or VGA monitor, and speaker cable plug in here.
4	KVM Port Section	The custom USB HDMI KVM cable supplied with the package for linking the CL3800 to a computer or switch plugs in here. Additional DVI and VGA ports are provided.
5	Grounding Terminal	The grounding wire (used to ground the unit) attaches here.

This Page Intentionally Left Blank

# Chapter 2

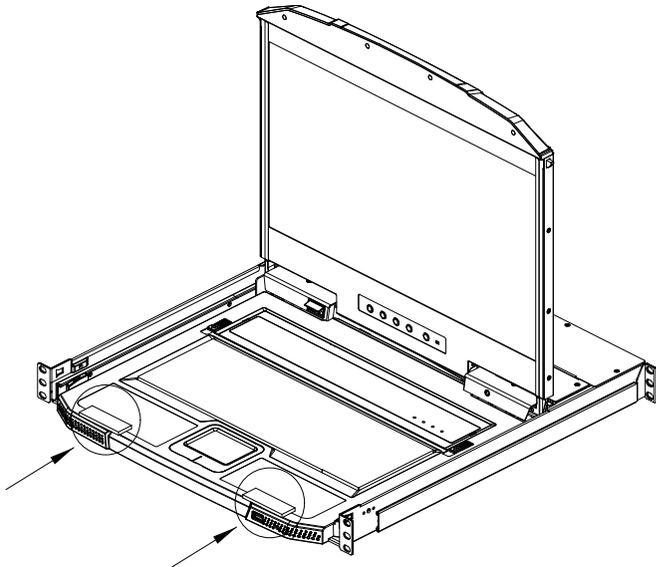
## Hardware Setup

### Before you Begin

---



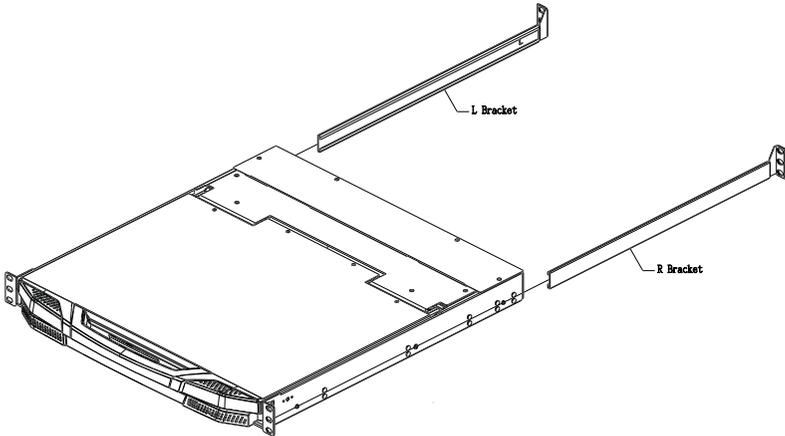
1. Important safety information regarding the placement of this device is provided on page 35. Please review it before proceeding.
2. Make sure that power to all the devices you will be connecting up has been turned off. You must unplug the power cords of any computers that have the Keyboard Power On function.
3. Packing material has been inserted to protect the CL3800 during shipping. Slide the LCD module out (see *Opening the Console*, page 13), until the packing material is visible. Remove the packing material before installing the unit, as shown in the diagram below.



## Standard Rack Mounting

---

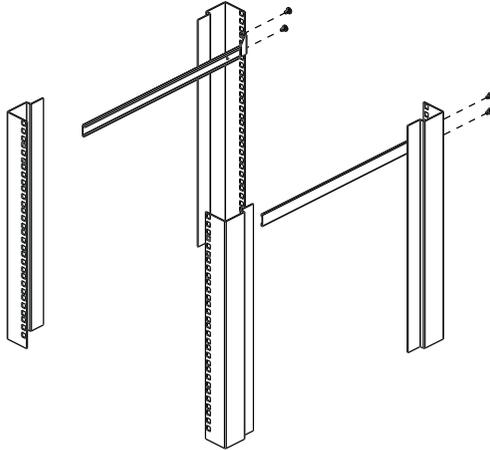
A standard rack mounting kit enables the CL3800 to be mounted in a rack with a depth of 47–75 cm.



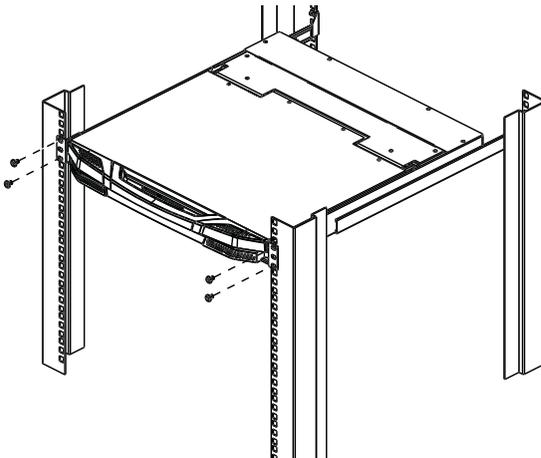
- 
- Note:**
1. It takes two people to mount the module: one to hold it in place, the other to screw it in.
  2. The standard rack mounting kit does not include screws or cage nuts. If you need additional screws or cage nuts, contact your rack dealer.
  3. Optional mounting kits – including single person *Easy Installation* kits – are available with a separate purchase. See *Optional Rack Mounting*, page 41 in the Appendix for details.
-

To rack mount the CL3800, do the following:

1. Attach the left and right mounting brackets to the back of the rack, installing four screws in the tabs to secure them in place.



2. While one person inserts the CL3800 into place by sliding its left and right side bars into the mounting brackets (on the rack), have a second person install four screws in the front tabs to secure the module to the front of the rack.



---

**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.

---

## Connecting Up

---

Refer to the example installation diagram as you perform the following steps:

1. Plug the USB; then HDMI, DVI-D, or VGA and audio connectors of a KVM cable (either supplied with the unit, or purchased separately, see *Cables*, page 3) into the KVM ports located in the CPU section on the rear of the CL3800.

---

**Note:** The CL3800 supports speakers only. It does not support a microphone. Connect the KVM cable's speaker jack (green) to the CL3800's audio port.

---

2. Plug the keyboard, monitor, mouse and audio connectors of the KVM cable into their respective ports in the Console Section of a KVM switch or computer.
3. If you are installing an external console, plug your keyboard, monitor, mouse and speakers into their respective ports in the Console Section of the CL3800.

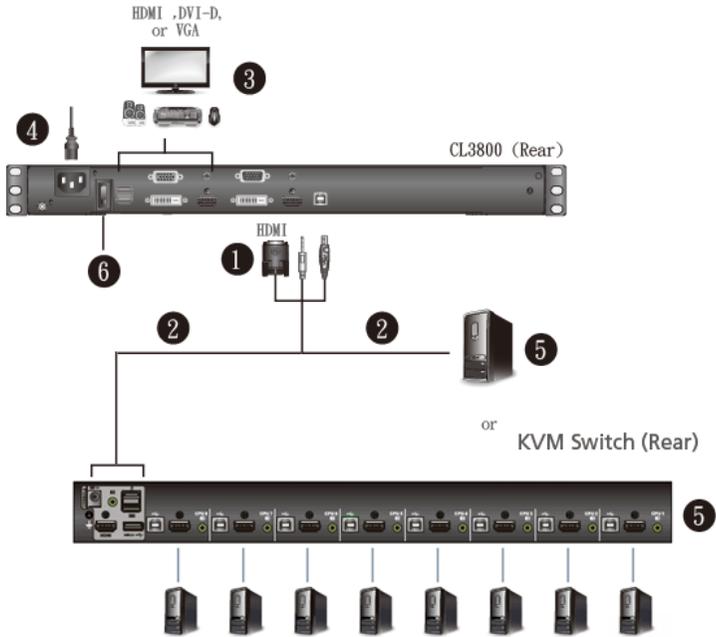
---

**Note:** The CL3800 supports an HDMI, DVI-D, or VGA external console monitor, but only one video signal (HDMI, VGA, or DVI-D) can be displayed at a time. The DVI monitor will display a DVI-D signal only.

---

4. Plug the CL3800's power cord into the CL3800's power socket and into a power source.
5. Power up your KVM installation.
6. Turn on the power to LCD Console.

## Installation Diagram



This Page Intentionally Left Blank

# Chapter 3

## Operation

### Opening the Console

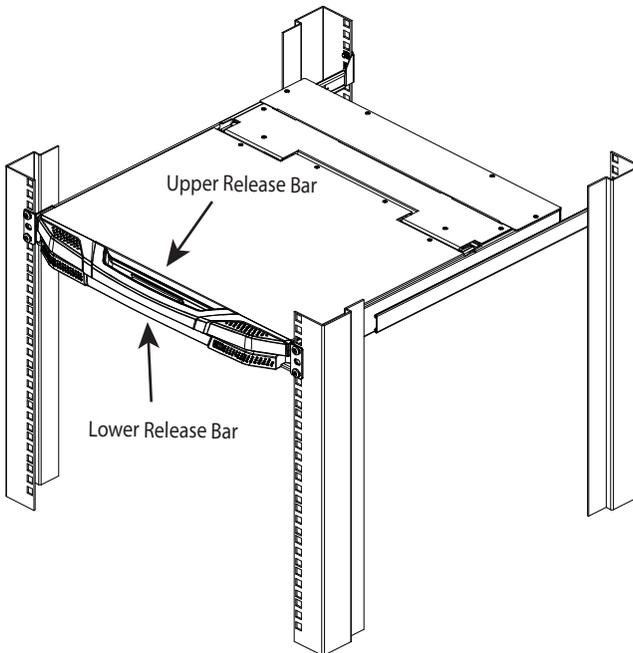
---

The CL3800's console consists of two modules: an 18.5" LCD display module located under the top cover; and a keyboard / touch pad module below the LCD module.

The modules can either slide together, or independently. This allows you to have the LCD display available for viewing while the keyboard / touch pad module is conveniently out of the way when not in use.

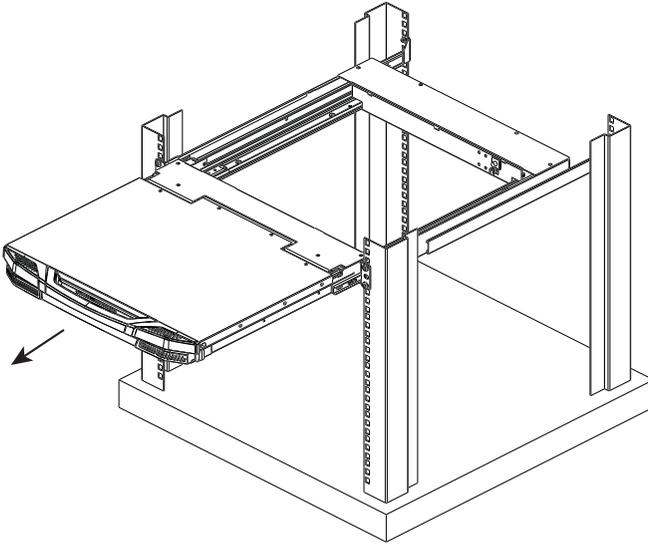
### Opening Separately

1. Use the Upper and Lower Release Bar handles to pull the console module straight out.

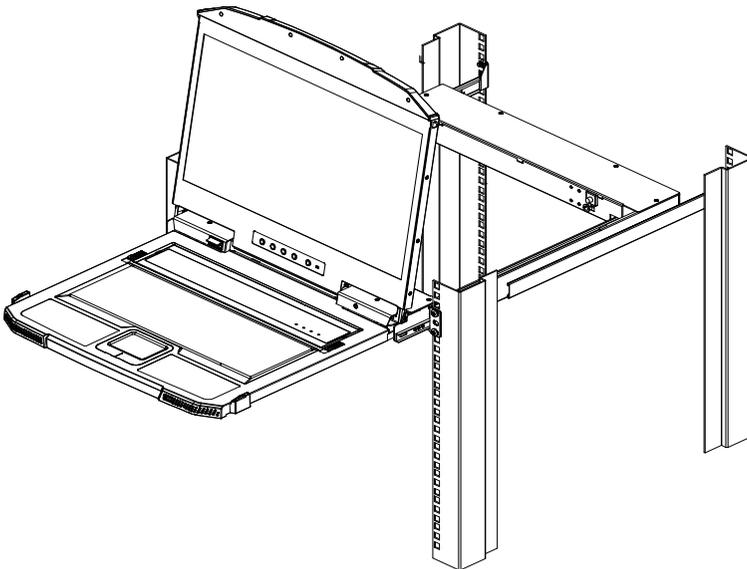


*(Continues on next page.)*

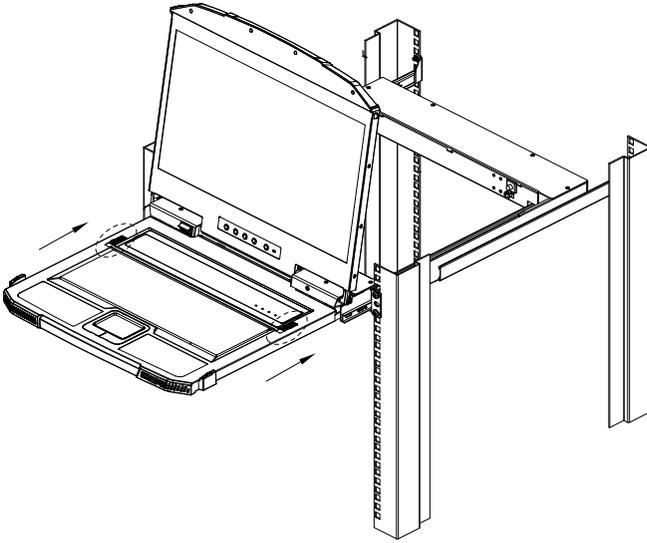
2. Pulling, slide the console module out until it clicks in place.



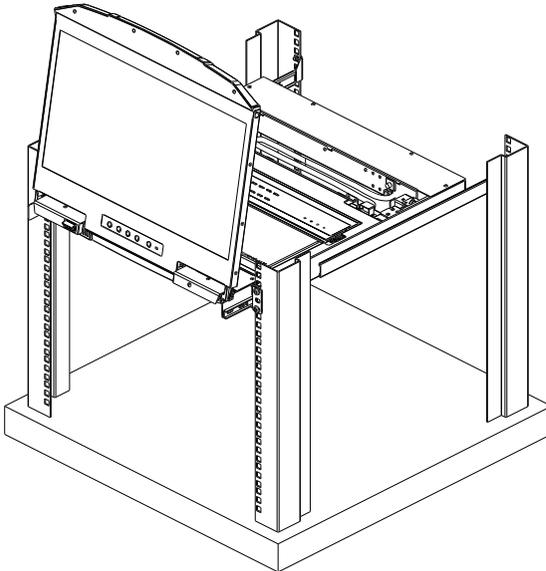
3. Raise the top panel all the way back to expose the LCD screen.



4. To independently retract the keyboard into the rack, slide both Keyboard Module Releases and push the keyboard module all the way in.

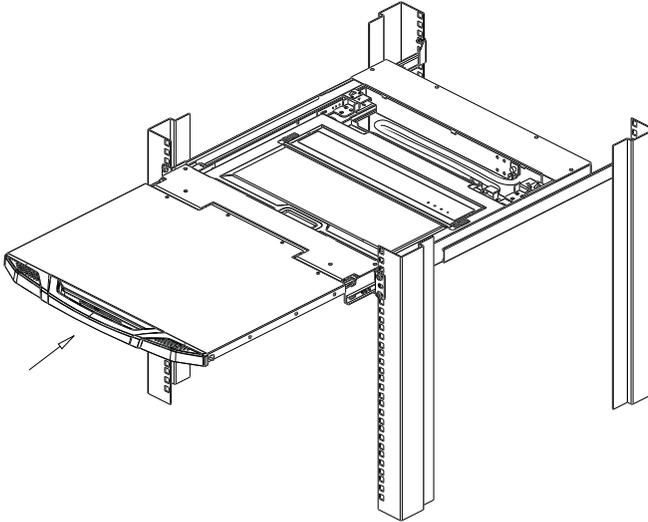


5. Slide the keyboard in until it's completely inserted into the rack.



*(Continues on next page.)*

6. To close the LCD screen, lower the panel module until it lies flat and slide it back in.



## **Opening Together**

Refer to the diagrams in the *Opening Separately* section as you do the following:

1. Pull the release catch and pull the top and bottom panels out until the keyboard module clicks into place.

---

**Note:** Once the console has been released, you can let go of the catch.

---

2. Pull the top panel the rest of the way out until it clicks into place.
3. Rotate the top panel all the way back to expose the LCD screen.

---

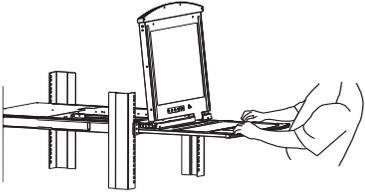
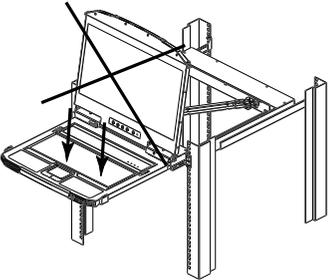
**Note:** Refer to the warning regarding placing excessive weight on the keyboard module on the following page.

---

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

## LCD OSD Configuration

### 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"> <li>◆ When you have not entered the LCD OSD Menu function, pressing this button invokes the Menu function, and brings up the Main Menu.</li> <li>◆ 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.</li> </ul>
	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"> <li>◆ 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.</li> <li>◆ 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.</li> <li>◆ When you are at the Main Menu, pressing this button exits the LCD OSD.</li> </ul>

## Adjustment Settings

An explanation of the LED 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 LED may have the wrong phase setting. Adjust the phase setting to eliminate these problems.
Clock	If vertical banding is visible on the display, your LED may have the wrong clock setting. Adjust the clock setting to eliminate vertical banding.
H-Position	Positions the display area on the LED panel horizontally (moves the display area left or right).
V-Position	Positions the display area on the LED 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.
Input Source	Lets you select an <i>Analog (VGA)</i> or <i>Digital (HDMI, DVI)</i> input source for connecting an external console to the CL3800. See <i>External Console Section</i> , page 7.
Reset	Resets the adjustments on all menus and submenus to their factory default settings. <b>Note:</b> The <i>Language</i> setting does not return to the factory default, but remains at the one that you have set it to.

---

## Hot Plugging

---

The CL3800 supports *hot plugging* – components can be removed and added to the console by unplugging their cables from the ports without the need to shut down the CL3800.

## Powering Off and Restarting

---

If it becomes necessary to Power Off the CL3800 (to upgrade the firmware, for example), simply turn off the power to the unit using the rear panel power switch. To restart the CL3800, turn the rear panel power switch back on.

## Port ID Numbering & Port Selection

---

Port ID numbering and Port Selection follow the method used by the KVM switch connected to the CL3800. Consult your KVM switch's User Manual for details.

## Hotkeys

Console selection is accomplished with the following hotkey combinations:

Combination	Action	Beeps	LEDs
[Ctrl] [Alt] [Shift] [P] [C] [Enter]	To select normal mode (pc, etc.).	2	None
[Ctrl] [Alt] [Shift] [M] [A] [C] [Enter]	To select Mac	2	None
[Ctrl] [Alt] [Shift] [S] [U] [N] [Enter]	To select SUN	2	None
[Ctrl] [Alt] [Shift] [u] [p] [g] [r] [a] [d] [e] [Enter]	Activates the Firmware Upgrade Mode. <b>Note:</b> this Hotkey sequence only works when the Firmware Upgrade Recovery Switch (see page 28) is in the <b>Normal</b> position.	None	3 Flashing when upgrade is in process
[Ctrl] [Alt] [Shift] [L] [Enter]	Enable Local (LCD) console; Disable 2nd console or external console video.	2	None
[Ctrl] [Alt] [Shift] [R] [Enter]	Enable 2nd console, or external console video; Disable Local (LCD) console.	2	None
[Ctrl] [Alt] [Shift] [L] [R] [Enter] or [Ctrl] [Alt] [Shift] [R] [L] [Enter]	Enable both consoles (default).	2	None
[Ctrl] [Alt] [Shift] [U] [M] [Enter]	Configures the front USB Port to mouse mode (Mouse functionality is immediate upon switching to USB mouse mode). (USB mouse mode [U] [M] is the default)	2	None
[Ctrl] [Alt] [Shift] [U] [P] [Enter]	Configures the front USB Port to peripheral mode.	2	None
[Ctrl] [Alt] [Shift] [F4] [Enter]	Print the switch's current settings via a text editor or word processor.	None	None

- Note:**
1. Press the keys in sequence – one key at a time. First **[Ctrl]**, then **[Alt]**, then **[Shift]**, etc.
  2. Console selections are not saved. If the CL3800 is powered off, it reverts to the default setting of both consoles enabled when it is powered on again.

3. Either side of the keyboard can be used to invoke **[Shift] [Ctrl] [Alt]** hotkeys.
  4. If the KVM switch connected to the CL3800 uses the **[Ctrl] [Alt] [Shift]** combination to invoke its hotkey mode, you won't be able to access any of its hotkey operations because the CL3800 will capture the combination for console selection first.
-

This Page Intentionally Left Blank

# Chapter 4

## Firmware Upgrade

### The Firmware Upgrade Utility

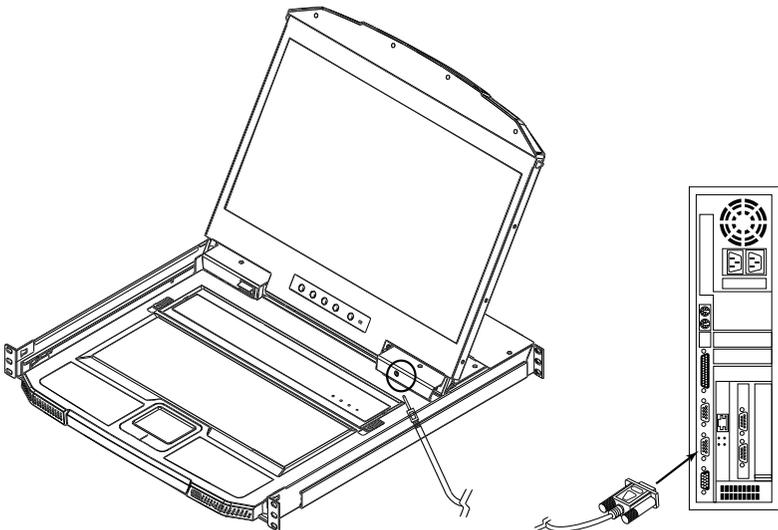
---

As new firmware revisions become available for the CL3800, firmware upgrade packages are posted on the ATEN web site. The Windows-based Firmware Upgrade Utility (FWUpgrade.exe) provides a smooth, automated process for upgrading the CL3800's firmware. Check the web site regularly to find the latest firmware packages and information relating to them.

#### **Before You Begin**

To prepare for the firmware upgrade, do the following:

1. From a computer that is not part of your CL3800 installation go to ATEN's 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 CL3800.



## **Firmware Upgrade Mode**

The CL3800's firmware upgrade mode can be accessed one of two ways: by entering a hotkey sequence (see *Hotkeys*, page 24), or by placing the CL3800 in firmware upgrade recovery mode (see *Firmware Upgrade Recovery*, page 33).

---

**Note:** In order to activate the Firmware Upgrade Mode using a hotkey sequence, the Firmware Upgrade Recovery Switch (see page 6) must be set to the **Normal** position.

---

1. Turn off the power to the CL3800 using the power switch located on the back side of the console.
2. Slide the firmware switch to RECOVER (see page 6).
3. Turn on the power to the CL3800 using the power switch located on the back side of the console.

When the CL3800 is in Firmware Upgrade Mode, the Num Lock, Caps Lock and Scroll Lock LEDs will continually flash on and off.

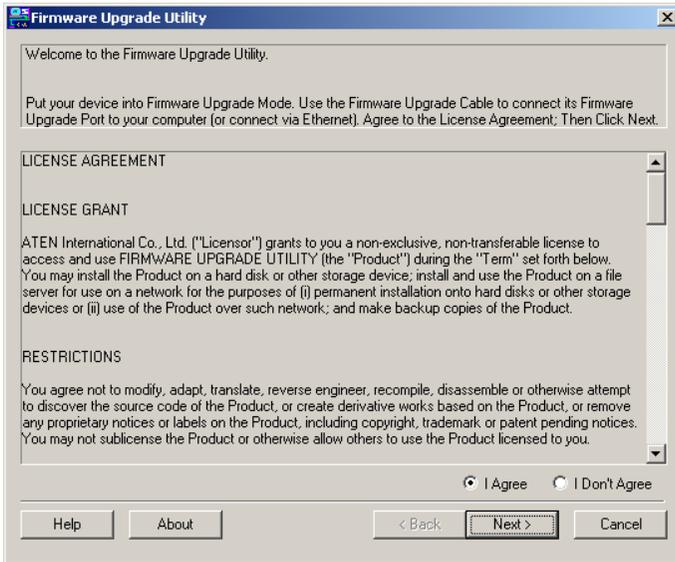
To exit the Firmware Upgrade Mode, see *Exiting Firmware Upgrade Mode*, page 33.

## Performing the Upgrade

### Starting the Upgrade:

1. With the CL3800 in Firmware Upgrade Mode, run the downloaded Firmware Upgrade Package file from your computer - either by double clicking the file icon, or by opening a command line and keying in the full path and filename.

The Firmware Upgrade Utility *Welcome* screen appears:

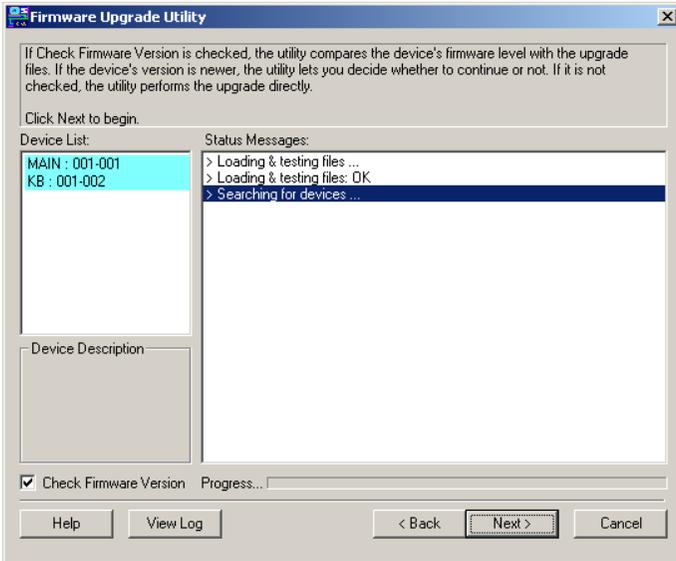


2. Read and *Agree* to the License Agreement (enable the I Agree radio button).

*(Continues on next page.)*

(Continued from previous page.)

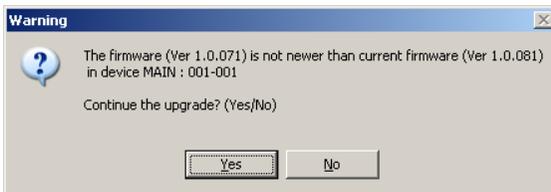
3. Click **Next**. The Firmware Upgrade Utility main screen appears:



The Utility inspects your installation. All the devices capable of being upgraded by the package are listed in the *Device List* panel.

4. 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 the upgrade:

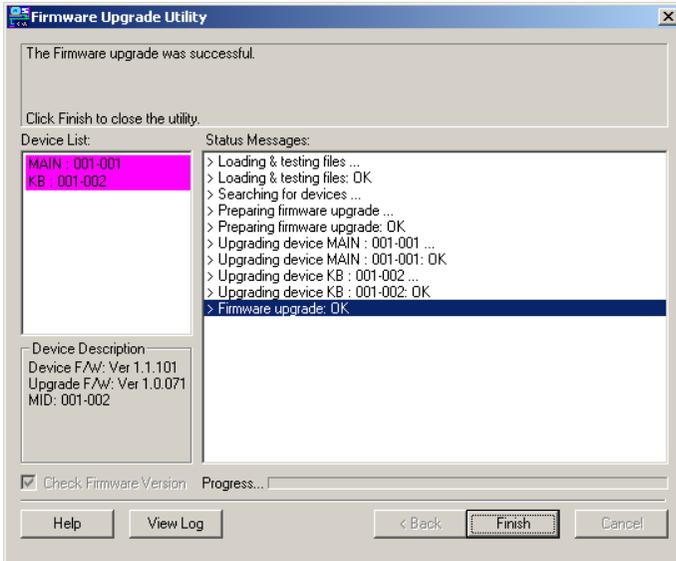


If you didn't enable *Check Firmware Version*, the Utility installs the upgrade files without checking whether they are a higher level, or not.

- ◆ As the Upgrade proceeds status messages appear in the Status Messages panel, and the progress toward completion is shown on the *Progress* bar.

**Upgrade Succeeded:**

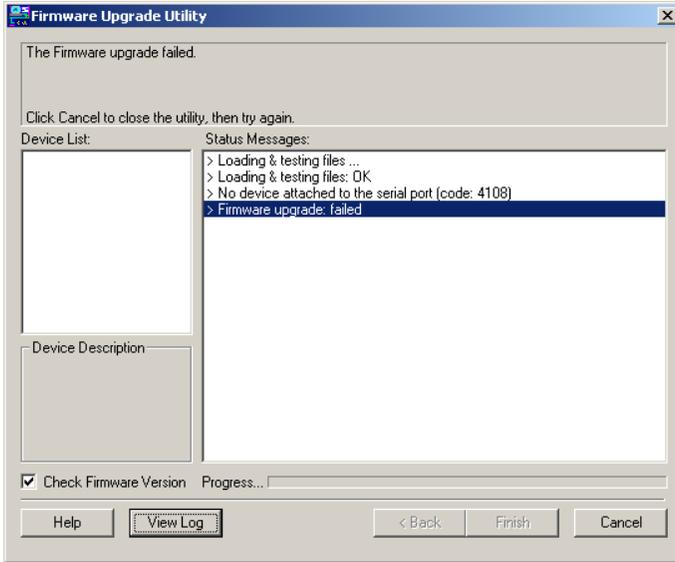
After the upgrade has completed, a screen appears to inform you that the procedure was successful:



Click **Finish** to close the Firmware Upgrade Utility.

**Upgrade Failed:**

If the upgrade failed to complete successfully the *Upgrade Failed* screen appears:



Click **Cancel** to close the Firmware Upgrade Utility. See the next section, *Firmware Upgrade Recovery*, for how to proceed.

## **Firmware Upgrade Recovery**

There are three conditions that call for firmware upgrade recovery:

- ◆ When the unit's firmware becomes corrupted for some reason and you are unable to operate it.
- ◆ When a firmware upgrade procedure is interrupted.
- ◆ When a firmware upgrade procedure fails.

To perform a firmware upgrade recovery, do the following:

1. Power off the CL3800.
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 CL3800 back on and repeat the upgrade procedure.
5. After the CL3800 has been successfully upgraded, power it off, and slide the *Firmware Upgrade Recovery Switch* back to the **Normal** position.
6. Power the CL3800 back on.

## **Exiting Firmware Upgrade Mode**

To exit the Firmware Upgrade Mode, do the following:

1. Slide the *Firmware Upgrade Recovery Switch* (see page 6) to the **Normal** position.
2. Power off and restart the CL3800 according to the instructions given in the *Powering Off and Restarting* section (see page 23).

This Page Intentionally Left Blank

## Safety Instructions

---

### General

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

- ◆ If an extension cord is used with this device make sure that the total of the ampere ratings of all products used on this cord does not exceed the extension cord ampere rating. Make sure that the total of all products plugged into the wall outlet does not exceed 15 amperes.
- ◆ To help protect your system from sudden, transient increases and decreases in electrical power, use a surge suppressor, line conditioner, or uninterruptible power supply (UPS).
- ◆ Position system cables and power cables carefully; Be sure that nothing rests on any cables.
- ◆ Never push objects of any kind into or through cabinet slots. They may touch dangerous voltage points or short out parts resulting in a risk of fire or electrical shock.
- ◆ Do not attempt to service the device yourself. Refer all servicing to qualified service personnel.
- ◆ If the following conditions occur, unplug the device from the wall outlet and bring it to qualified service personnel for repair.
  - ◆ The power cord or plug has become damaged or frayed.
  - ◆ Liquid has been spilled into the device.
  - ◆ The device has been exposed to rain or water.
  - ◆ The device has been dropped, or the cabinet has been damaged.
  - ◆ The device exhibits a distinct change in performance, indicating a need for service.
  - ◆ The device does not operate normally when the operating instructions are followed.
- ◆ Only adjust those controls that are covered in the operating instructions. Improper adjustment of other controls may result in damage that will require extensive work by a qualified technician to repair.
- ◆ Do not connect the Audio Jack connector marked “UPGRADE” to a public telecommunication network.
- ◆ Avoid circuit overloads. Before connecting equipment to a circuit, know the power supply’s limit and never exceed it. Always review the electrical specifications of a circuit to ensure that you are not creating a dangerous condition or that one doesn’t already exist. Circuit overloads can cause a fire and destroy equipment.

---

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

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

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

# Specifications

Function	CL3800NW
<b>Computer Connections</b>	
Direct	1
<b>Console Selection</b>	Hotkey
<b>Connectors</b>	
External Console Ports	1 x HDMI Female 1 x DVI-D Female (White) 1 x HDB-15 Female (Blue) 2 x USB Type A Female 1 x 3.5mm Audio Jack Female (Green)
KVM Ports	1 x HDMI Female 1 x DVI-D Female (White) 1 x HDB-15 Male (Blue) 1 x USB Type B Female 1 x 3.5 mm Audio Jack Female (Green)
USB Port	1 x USB Type A Female
Firmware Upgrade	1 x RJ-11 Female
Power	1 x 3-prong AC Socket
<b>Switches</b>	
Reset	1 x Semi-recessed Pushbutton
Firmware Upgrade	1 x Slide
Power	1 x Rocker
LCD Power	1 x Pushbutton
LCD Adjustment	4 x Pushbutton
<b>LEDs</b>	
Power	1 x KVM Console (Dark Green) 1 x LCD (Orange)
Lock	1 x Num Lock (Green) 1 x Caps Lock (Green) 1 x Scroll Lock (Green)
<b>Video</b>	
Input Video Resolution	1920 x 1200 @ 60 Hz, DDC2B
<b>Panel Spec</b>	
LCD Module	18.5" TFT-LCD
Resolution	1920 x 1080 @ 60 Hz

---

<b>Function</b>	<b>CL3800NW</b>
Pixel Pitch	0.213 mm x 0.213 mm
Response Time	20 ms
Viewing Angle	178° (H), 178° (V)
Contrast Ratio	1000:1
Support Color	16.7M colors
Luminance	350 cd/m <sup>2</sup>
<b>Emulation</b>	
Keyboard / Mouse	USB
<b>Maximum Input Power Rating</b>	100–240V AC; 50–60Hz; 1A
<b>Power Consumption</b>	110V, 26.6W / 220V, 26.8W
<b>Environmental</b>	
Operating Temperature	0–40° C
Storage Temperature	-20–60° C
Humidity	0–80% RH Non-condensing
<b>Physical Properties</b>	
Housing	Metal
Weight	9.61 kg
Dimensions (L x W x H)	48.06 x 51.42 x 4.28 cm

---

## Optional Rack Mounting

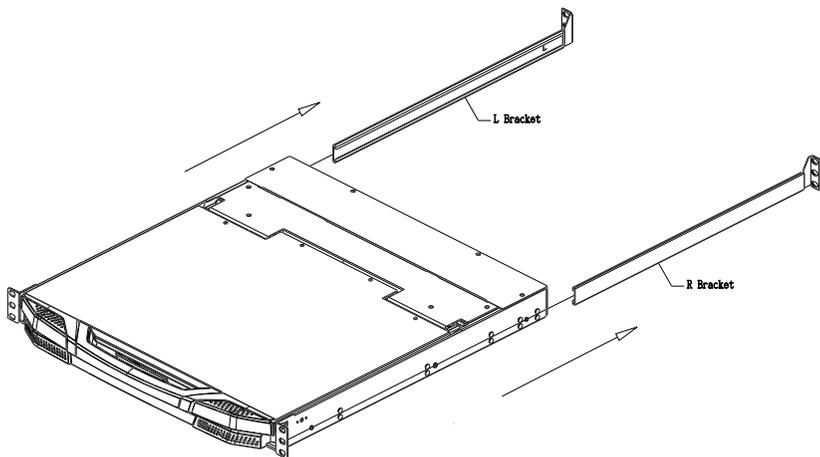
For convenience and flexibility, three optional rack mounting kits are available as shown in the following table:

Bracket Type	Size (cm)
Standard Installation – Long (2X-040G)	70.0—100.0
Easy Installation – Short (2X-041G)	45.0—70.0
Easy Installation – Long (2X-042G)	68.0—105.0

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 CL3800 according to the instructions given for *Standard Rack Mounting*, page 10.

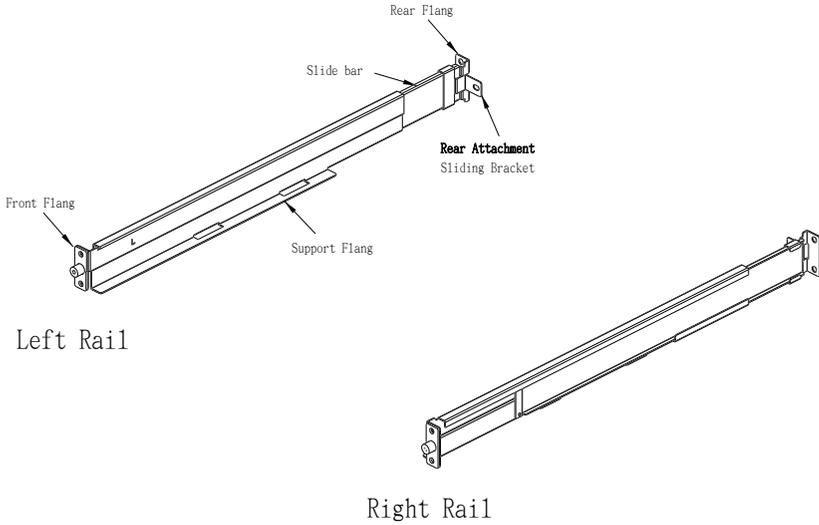
While it takes two people to perform a standard installation, with an *Easy-Installation* kit, one person can mount the CL3800. To install the *Easy-Installation* kit, do the following:

1. Remove the right and left standard sliding brackets from both sides of the CL3800.

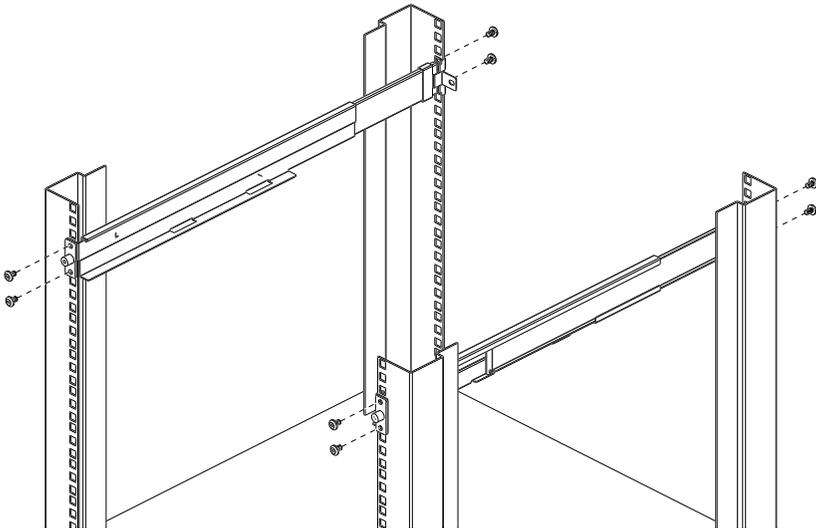


(Continues on next page.)

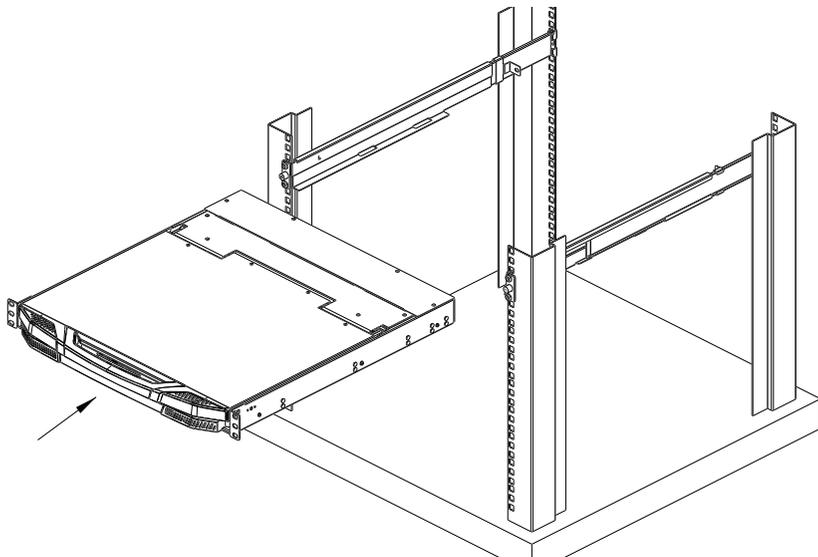
2. Attach the left and right *easy-installation* mounting rails to the inside of the rack. The flange that supports the CL3800 will be to the inside.



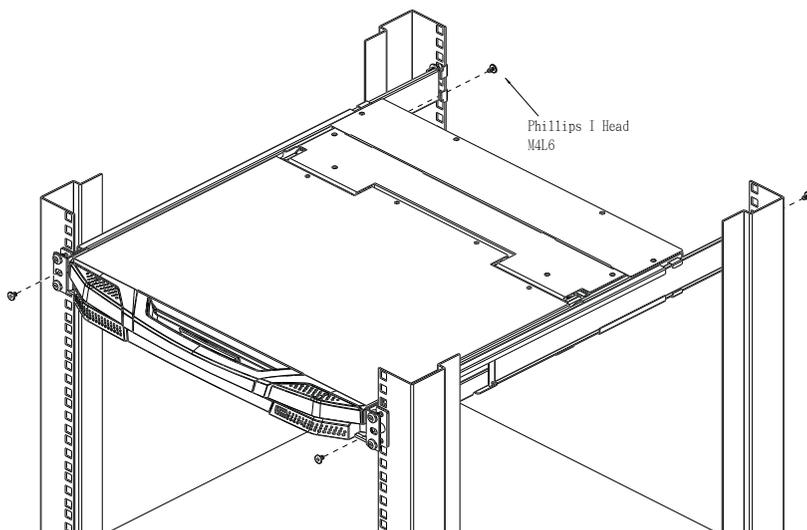
- a) Screw the front flanges to the rack first.
- b) Slide the bars with the rear flanges toward the rack until the flanges make contact with the rack, then screw the rear flanges to the rack.



- Slide the CL3800 onto the support flanges. Use the screws supplied with this package to loosely attach the front of the CL3800 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 CL3800, then use the screws supplied with this package to attach the bars to the rear of the CL3800 (tighten the screws all the way).



5. Slide the CL3800 open and closed a couple of times to be sure that it is properly aligned and operating smoothly. (See *Opening the Console*, page 15, for opening and closing procedures.)
6. After determining that the CL3800 is lined up and operating correctly, finish by fully tightening the front attachment screws inserted in Step 3.

## Sun Keyboard Emulation

The PC compatible (101/104 key) keyboard can emulate the functions of the Sun keyboard when the Control key [Ctrl] is used in conjunction with other keys. The corresponding functions are shown in the table below.

PC Keyboard	Sun Keyboard
[Ctrl] [T]	Stop
[Ctrl] [F2]	Again
[Ctrl] [F3]	Props
[Ctrl] [F4]	Undo
[Ctrl] [F5]	Front
[Ctrl] [F6]	Copy
[Ctrl] [F7]	Open
[Ctrl] [F8]	Paste
[Ctrl] [F9]	Find
[Ctrl] [F10]	Cut
[Ctrl] [1]	
[Ctrl] [2]	
[Ctrl] [3]	
[Ctrl] [4]	
[Ctrl] [H]	Help
	Compose
	

**Note:** When using key combinations, press and release the first key (Ctrl), then press and release the activation key.

## Mac Keyboard

The PC compatible (101/104 key) keyboard can emulate the functions of the Mac keyboard. The emulation mappings are listed in the table below.

PC Keyboard	Mac Keyboard
[Shift]	Shift
[Ctrl]	Ctrl
	
[Ctrl] [1]	
[Ctrl] [2]	
[Ctrl] [3]	
[Ctrl] [4]	
[Alt]	Alt
[Print Screen]	F13
[Scroll Lock]	F14
	=
[Enter]	Return
[Backspace]	Delete
[Insert]	Help
[Ctrl] 	F15

**Note:** When using key combinations, press and release the first key (Ctrl), then press and release the activation key.

---

## Troubleshooting

---

Symptom	Action
There are ghost images on the external monitor.	The distance between the external console and the CL3800 is too great. The maximum DVI cable distance should not exceed 20m and, in some cases, may need to be shorter. Replace the DVI cable with one of an appropriately short length.
Some characters I enter from the keyboard do not display correctly.	The keyboard layout setting for the port does not match the keyboard you are using. On your switch, change the keyboard layout setting for the port to match the layout of the keyboard you are using.
I can't use the special keys on the Sun external keyboard to control Sun computers.	Use Sun keyboard emulation keystrokes (page 45) to achieve all Sun keyboard functions.

## Limited Warranty

---

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

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

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

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

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

# Index

## A

- AC Power Models  
Specifications, 39

## C

- Connecting Up, 12
- Console
  - Opening Separately, 15
  - Opening Together, 19
- Console Selection, 24

## F

- Features, 2
- Firmware upgrade
  - cable, 27
  - Mode, 28
  - recovery, 33
  - utility, 27

## H

- Hot Plugging, 23

## K

- Keyboard Emulation, 45
  - Mac, 46
- KL1100
  - Front View, 5
  - Rear View (AC Power), 7
  - Rear View (DC Power), 8

## L

- LCD
  - Buttons, 21
  - OSD configuration, 21

## O

- Online
  - Registration, iii
- Opening the Console, 15
- Operating Precautions, 20

## P

- Port ID
  - Numbering & Selection, 23
- Powering Off, 23
- Precautions, 20

## R

- Rack Mounting
  - Optional, 41
  - Standard, 10
- Reset Switch, 6
- Restarting, 23
- RoHS, ii

## S

- Safety Instructions
  - General, 35
  - Rack Mounting, 37
- Specifications, 39
  - AC Power Models, 39
- Sun Keyboard Emulation, 45
- System Requirements
  - Cables, 3
  - External Console, 3
  - LCD Console, 3
  - Operating Systems, 4

## T

- Technical Support, 38
- Telephone support, iii

Troubleshooting, 46

## **U**

User Notice, iv