

# Owner's Manual

## Rack-Mount Short-Depth HDMI KVM Console

Model: B021-SWHD-K

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# 1. Package Contents

- B021-SWHD-K Rack-Mount Short-Depth HDMI Widescreen KVM Console
- HDMI/USB KVM Cable (6 ft. / 1.8 m)
- 1U Mounting Rail Kit
- NEMA 5-15P to C13 Power Cord
- C13 to C14 Power Cord
- DB9 Stereo Firmware Upgrade Cable
- Quick Start Guide

Check to ensure all 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 switch or to any other devices on the installation.

# 2. Features

- Short-depth design allows you to work with rack-mounted equipment in narrow spaces.
- Integrated LCD KVM console with 18.5" LED-backlit widescreen LCD monitor in a single-rail housing with top and bottom clearance for easy operation in a 1U high system rack.
- Supports HDMI video input and external console with USB/HDMI connectors.
- LCD monitor supports full HD resolution of 1920 x 1080 @ 60 Hz.
- External console supports input video resolutions up to 1920 x 1200 @ 60 Hz.
- Console lock enables the console drawer to remain securely locked away in position when not in use.
- Additional hot-pluggable USB mouse port on front panel also functions as a USB peripheral port.
- Console selection via hotkey.
- Standard 105-key keyboard.
- Optional 2-in-1U mounting kit for space-saving, easy and flexible operation
- No software required.
- Firmware upgradable.
- Supports hot-plugging.

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

## 3. System Requirements

### 3.1 Console

- HDMI monitor capable of the highest possible resolution in the installation
- USB mouse
- USB keyboard

### 3.2 Computers

- HDMI card or built-in HDMI port

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

- USB-A port

### 3.3 Cables

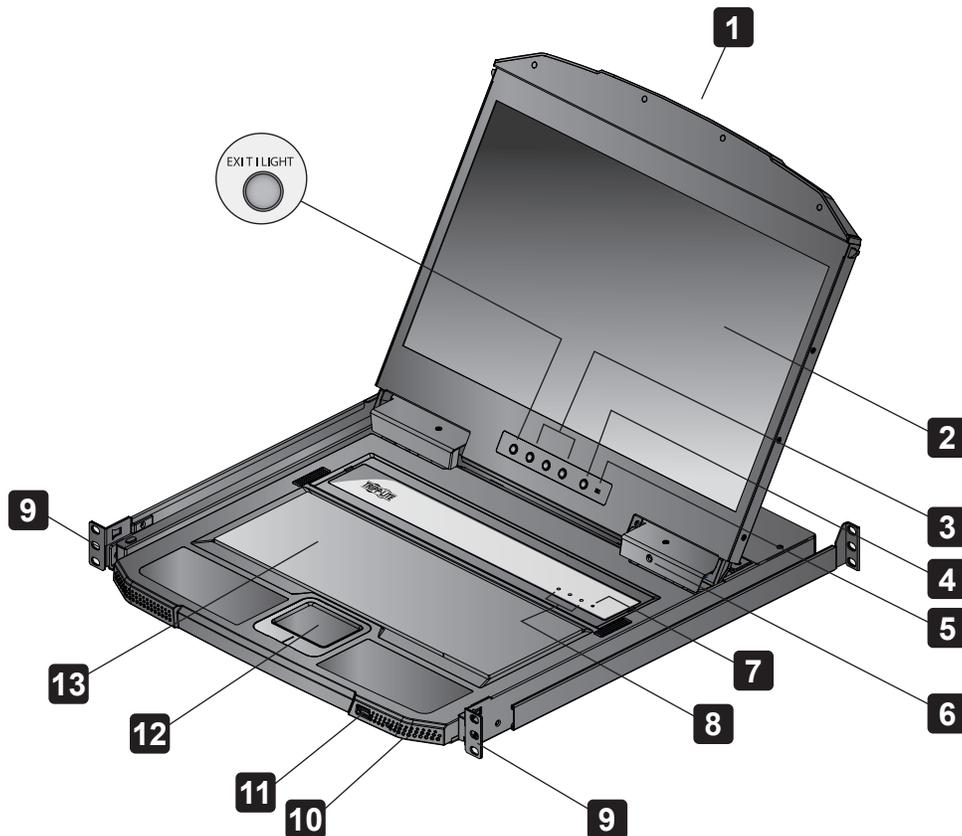
The quality of the display is affected by the quality and length of the cables. For optimum signal integrity and to simplify the layout, we strongly recommend you use high-quality custom cable sets available in varying lengths. Visit [tripplite.com](http://tripplite.com) for compatible cables.

### 3.4 Operating System

Supported operating systems include Windows, Mac, Linux and Sun.

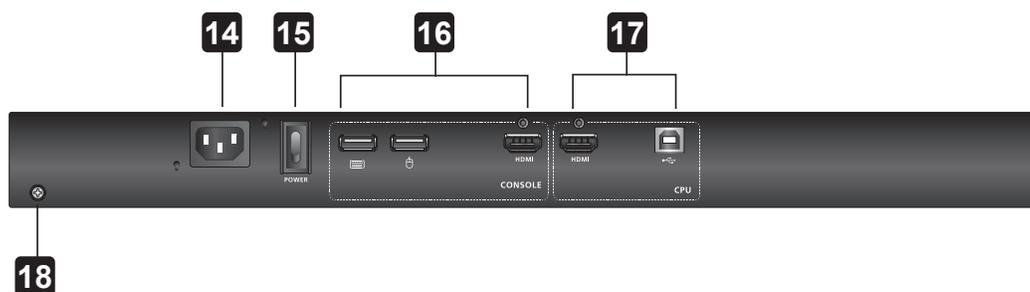
### 3.5 Components

#### Front View



## 3. System Requirements

### Rear View



No.	Component	Description
1	Upper Handle with Release Bar	Use this handle to pull the LCD module out or slide it into place (see section <b>6.1 Opening/Closing the KVM Console</b> ).
2	LCD Module	The cover flips up to access the LCD display.
3	LCD Controls	These buttons control the position and picture settings of the LCD display (see section <b>6.2 OSD Configuration</b> ).
4	LCD On / Off Button	Push this button to turn the LCD monitor on and off. The button will illuminate when the LCD monitor is off. <b>Note:</b> <i>When the button illuminates, only the monitor is off, not the attached KVM switch.</i>
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 section <b>8.4 Firmware Upgrade Fail</b> ).
6	Firmware Upgrade Port	The firmware upgrade cable that transfers the firmware upgrade data from the administrator's computer to the KVM switch connects to this 3.5 mm connector.
7	Reset Switch	Pressing this switch performs a system reset. After the reset is complete, you can log in again. <b>Note:</b> <i>This switch is recessed and must be pushed with a small object, such as the end of a paper clip or a ballpoint pen.</i>
8	Lock LEDs	The Num Lock, Caps Lock and Scroll Lock LEDs are located here.
9	Rack-Mounting Tabs	Rack-mounting tabs are located at each corner of the unit (see section <b>5.1.1 Standard Rack Mounting</b> ).
10	Power LED	Lights indicate that the switch is powered up and ready to operate.
11	USB Port	USB peripherals (printers, scanners, mouse, etc.) plug into this port.
12	Touchpad	Standard mouse touchpad.
13	Keyboard Module	Standard 105-key keyboard.
14	Power Socket	The power cord from an AC source plugs in here to a standard 3-prong AC power socket.
15	Power Switch	This is a standard rocker switch that powers the unit on and off.
16	External Console Section	For flexibility and convenience, the B021-SWHD-K 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.
17	KVM Port Section to CPU	The custom USB HDMI KVM cable supplied with the unit links the B021-SWHD-K to a computer or switch plugs at this port. Additional DVI and VGA ports are provided.
18	Grounding Terminal	The grounding wire attaches here to ground the unit.

# 4. Important Safety Instructions

## 4.1 General Safety Instructions

- Read all of these instructions and save them for future reference.
- Follow all warnings and instructions marked on the device.
- Do not place the device on any unstable surface. 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 protect against overheating, these openings should never be blocked or covered.
- The device should never be placed on a soft surface such as a bed, sofa or rug. Doing so will block the device's ventilation openings. Moreover, the device should not be placed in a built-in enclosure unless adequate ventilation has been provided.
- Never spill liquid of any type on the device.
- Unplug the device from the wall outlet before cleaning. Use a damp cloth for cleaning. Do not use liquid or aerosol cleaners.
- The device should be operated from the power source indicated on the marking label. If uncertain of the power available, consult your dealer or local power company.
- The device is designed for IT power distribution systems up to 230V phase-to-phase voltage.
- As an added safety feature, the device is equipped with a 3-wire grounding type plug. If unable to insert the plug into the outlet, contact an electrician to replace the obsolete outlet. Do not attempt to plug into a two-prong ungrounded outlet. Always follow local/national wiring codes.
- Do not allow anything to rest on the power cord or cables. Route the power cord and cables to avoid them being stepped on or tripped over.
- If an extension cord is used with this device, ensure the total ampere ratings of all products used on the extension cord do not exceed its rated ampere rating. Also ensure all products plugged into the wall outlet do not exceed a total of 15 amperes.
- Consideration should be given to the connection of equipment and the supply circuit, as well as what effect overloading the supply circuit might have on overcurrent protection and supply wiring.
- To help protect the system from unexpected transient increases and decreases in electrical power, use a Tripp Lite Surge Protector, Line Conditioner or Uninterruptible Power Supply (UPS).
- Position system cables and power cables carefully so 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. 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 3.5 mm audio jack connector marked "UPGRADE" to a public telecommunication network.

## 4. Important Safety Instructions

- 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.
- This unit is suitable for installation in information technology rooms in accordance with Article 645 of the National Electrical Code NFPA 75.
- Use of this equipment in life support applications where failure of this equipment can reasonably be expected to cause the failure of the life support equipment or to significantly affect its safety or effectiveness is not recommended.

### 4.2 Rack-Mounting Safety Instructions

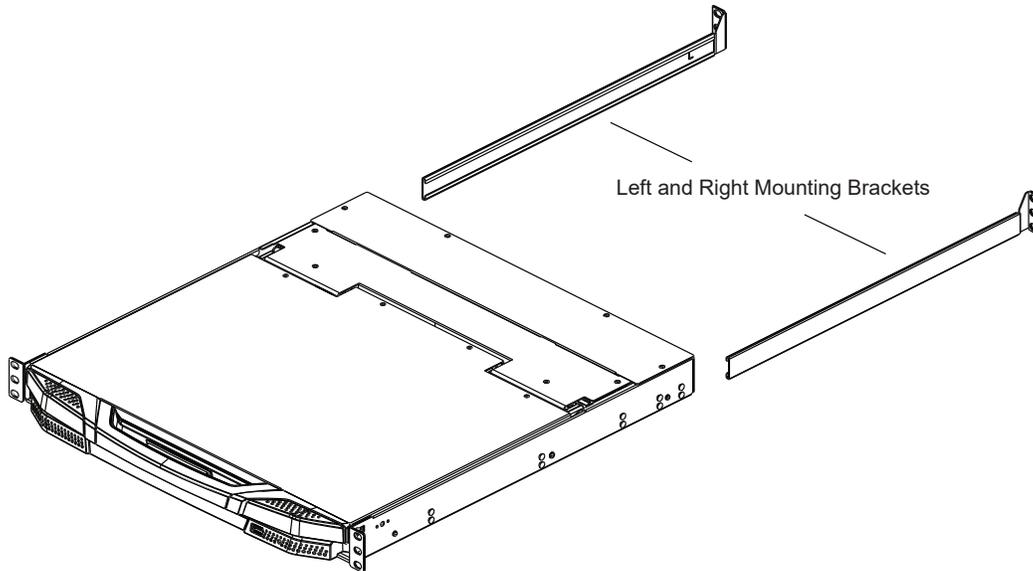
- The ambient operating temperature in the rack may be an issue and is dependent upon the rack load and ventilation. When installing in a closed or multi-device rack assembly, ensure the temperature will not exceed the maximum rated ambient temperature.
- Before installing the rack, ensure the stabilizers are secured to the rack, extended to the floor and 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 with the heaviest item loaded into the rack first.
- When loading the rack, avoid creating a hazardous condition due to uneven loading.
- Ensure the rack is level and stable before extending a device from the rack.
- Use caution when pressing the rail release latches or sliding a device into or out of a rack. Slide rails can pinch your fingers.
- After a device is inserted into the rack, carefully extend the rail into a locking position, 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.
- Ensure that proper airflow is provided to devices in the rack.
- 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 work space.



# 5. Installation

## 5.1 Standard Rack Mounting

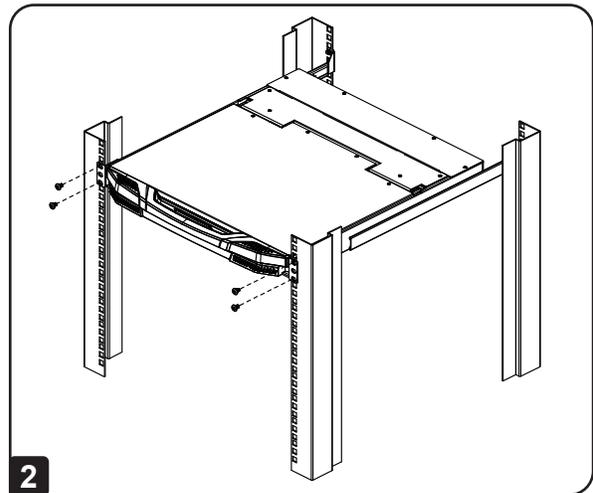
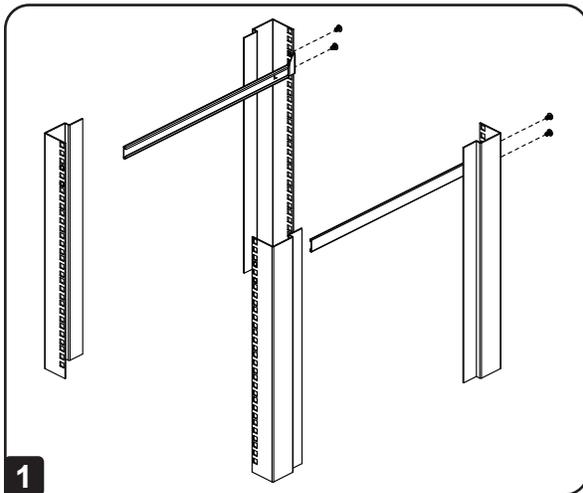
The standard rack-mounting kit enables the B021-SWHD-K to be mounted in a rack with a depth of 16.5 to 38.3 in. (42 to 72 cm).



### Notes:

- Using two people to mount the console is recommended.
- The standard rack-mount kit does not include screws or cage nuts.

To rack mount the B021-SWHD-K, do the following:



**1** Attach the left and right mounting brackets to the back of the rack. Use the included four screws to secure the mounting brackets into place.

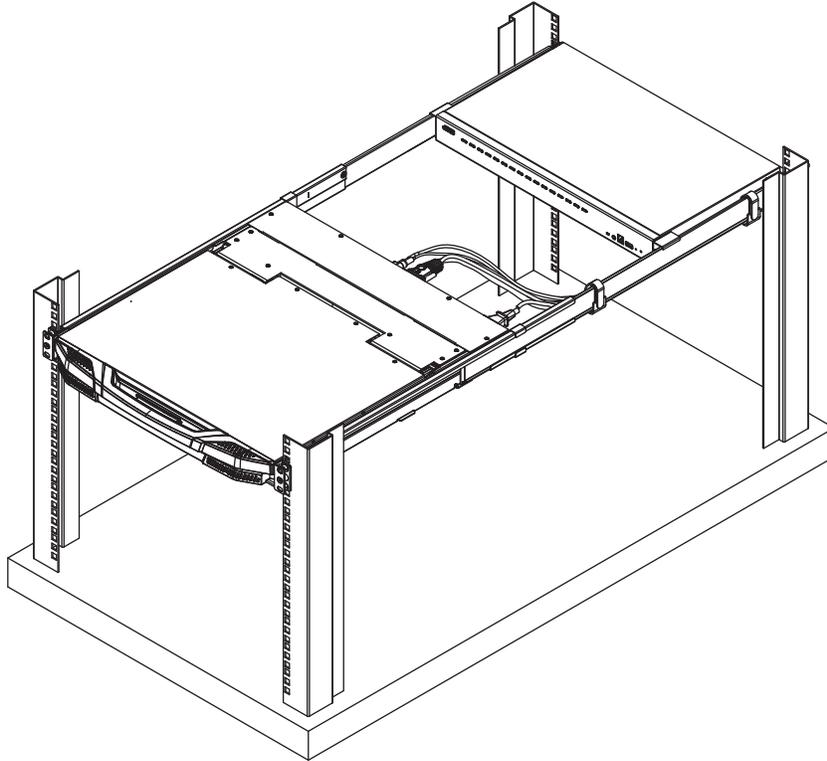
**2** Insert the KVM by sliding its left and right side bars into the mounting brackets. Use one person to hold the weight of the KVM and a second person to install four screws in the front tabs to secure to the front of the rack.

**Note:** Allow at least 2 in. (5 cm) on each side for proper ventilation, and at least 5 in. (12.7 cm) at the back for the power cord and cable clearance.

## 5. Installation

### 5.2 2-in-1 Mounting Kit Installation

The 2-in-1 mounting kit allows you to install the LCD KVM and KVM switch on the same unit of space.



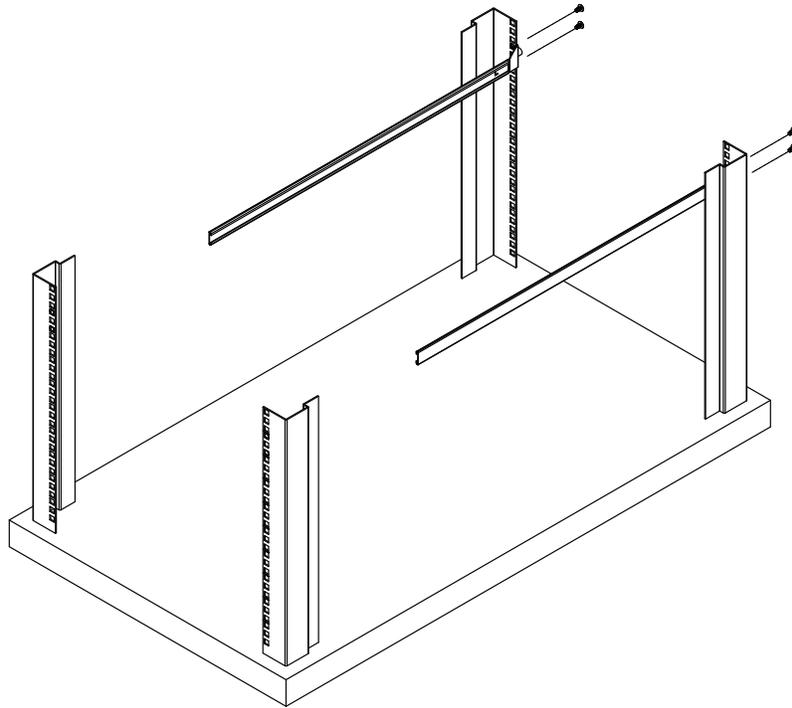
**Notes:**

- *Rack screws are not provided, unless otherwise specified.*
- *It is recommended to leave at least 1U of rack space available during installation.*

## 5. Installation

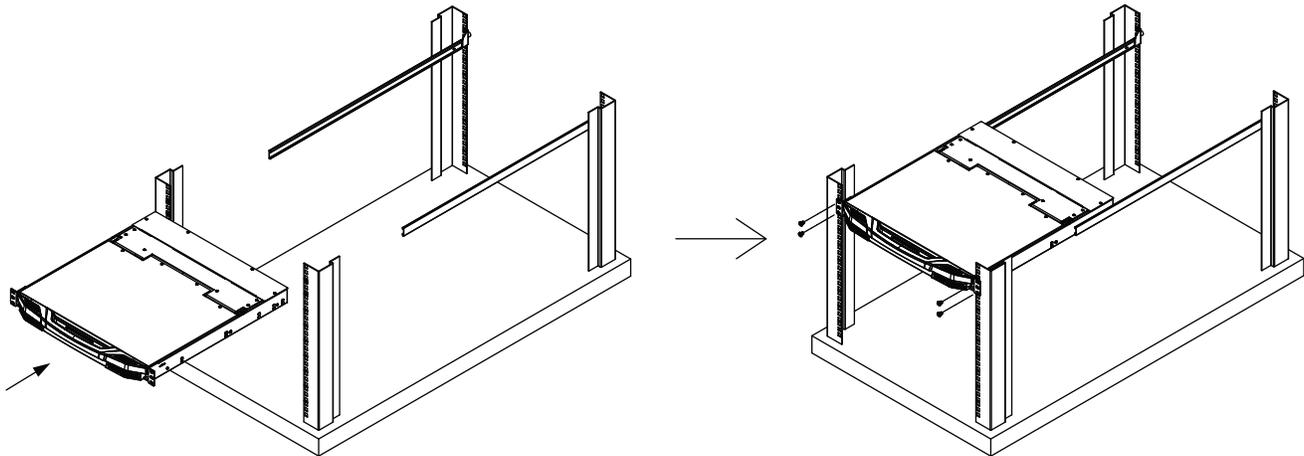
To install the B021-SWHD-K using the 2-in-1 mounting kit, do the following:

- 1 Screw the rail set to the rack using the included rack screws, as shown.



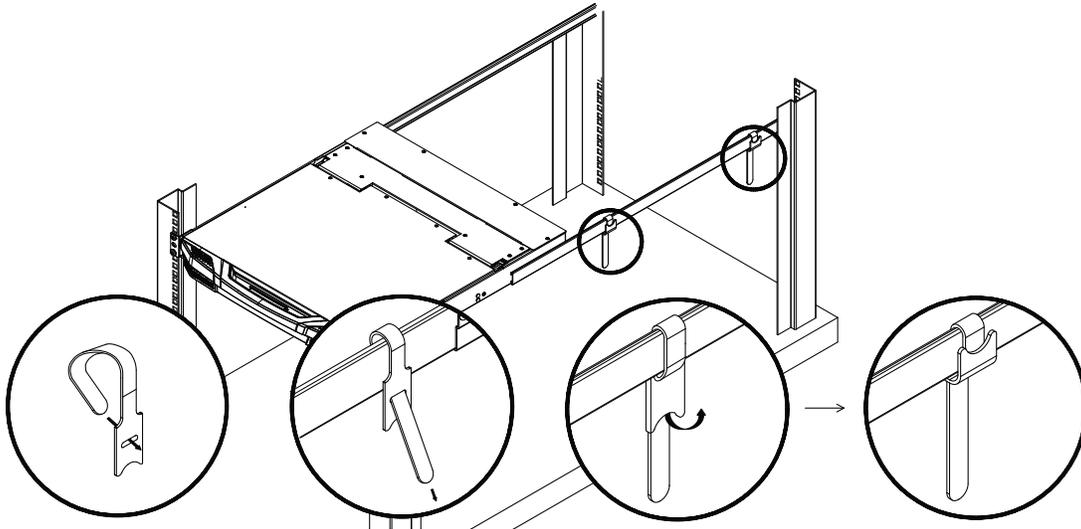
**Note:** When attaching the rail, make sure the triangular section of the rear of the 2-in-1 mounting kit's mounting rails is oriented upward and the side marked "L" or "R" is facing the interior.

- 2 To attach the LCD KVM onto the rack, align the rail set and stabilize it with the included rack screws.

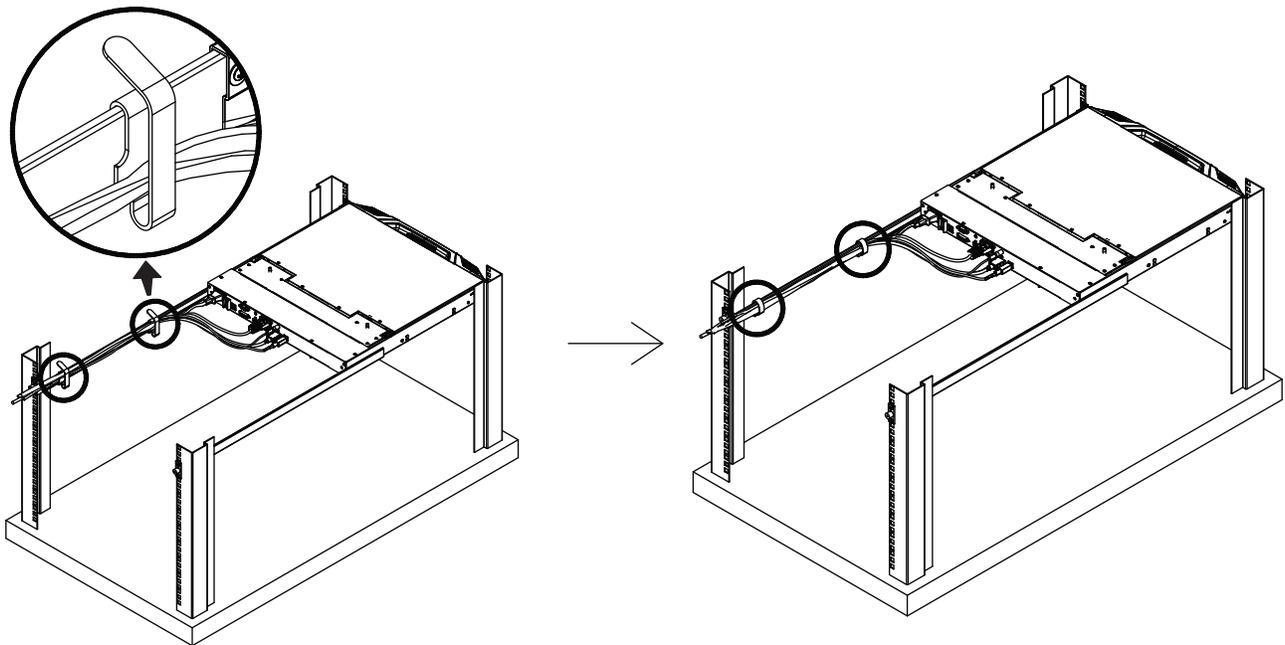


## 5. Installation

- 3** Face the LCD KVM directly from the front and attach two Velcro cable management straps on the right-hand rail (one to the LCD KVM and the other closer to the hind rack).



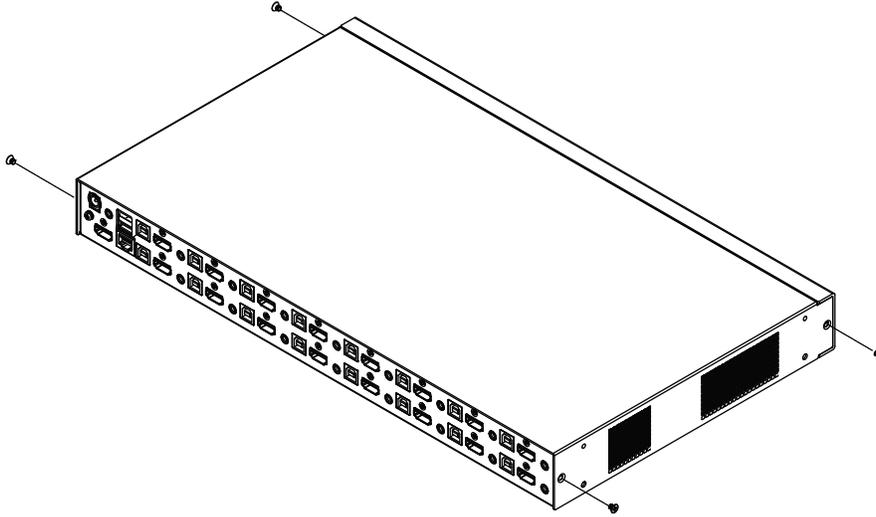
- 4** Connect the LCD KVM cables. Collect the cables to the right-hand side of the rail and wrap the narrower side of the cable straps around the cables.



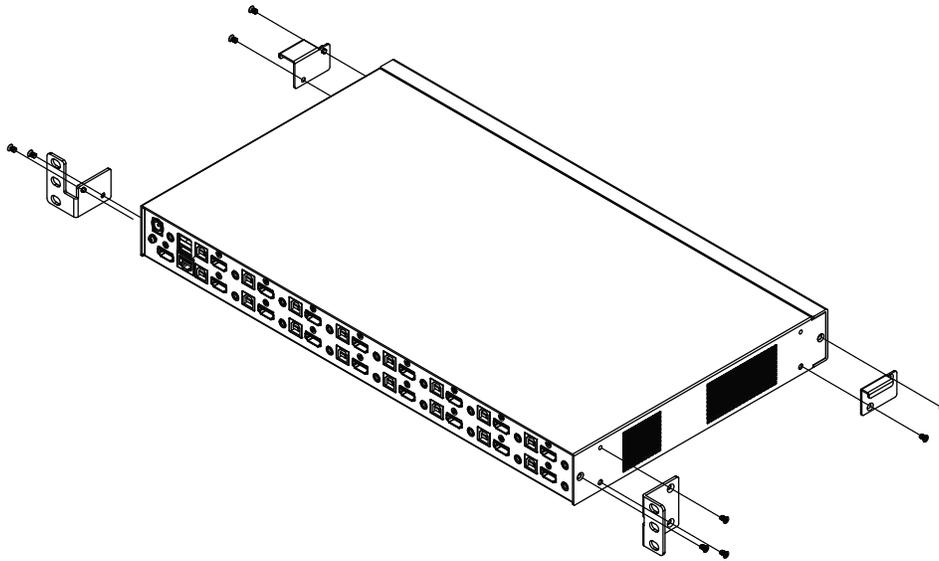
**Note:** It is recommended to manage the cables as tight and space-limiting as possible.

## 5. Installation

- 5 Remove the screws of the KVM switch, as shown.

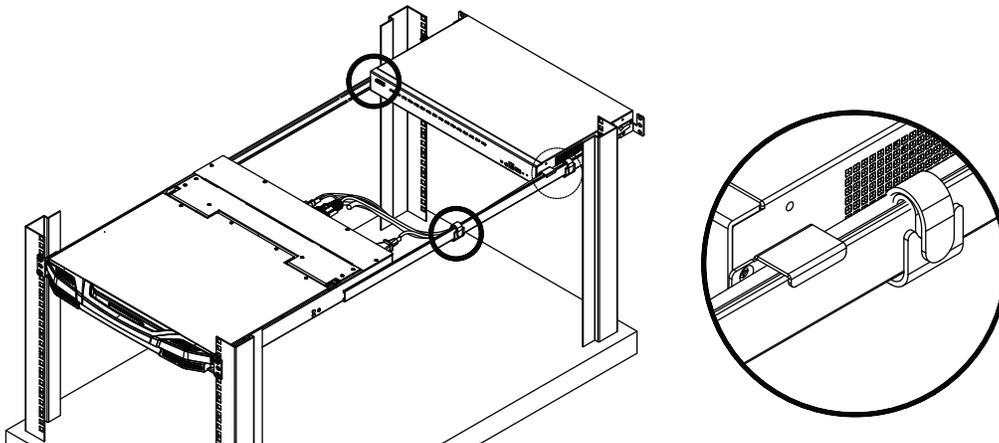


- 6 Using nine (9) M3x5 / M3x8 flathead screws, attach the hind KVM stabilizing set.

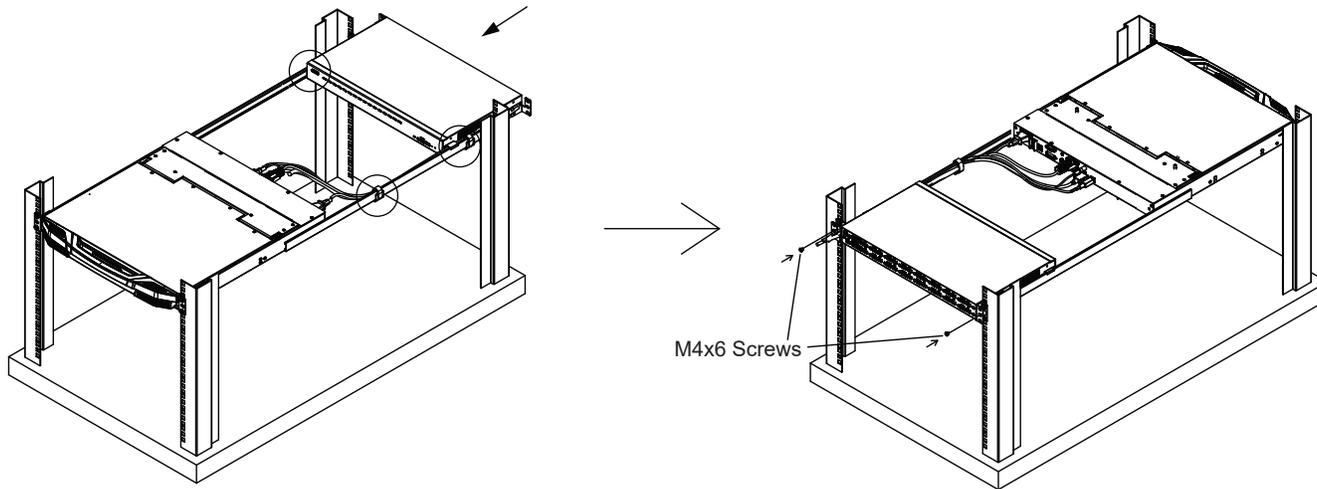


## 5. Installation

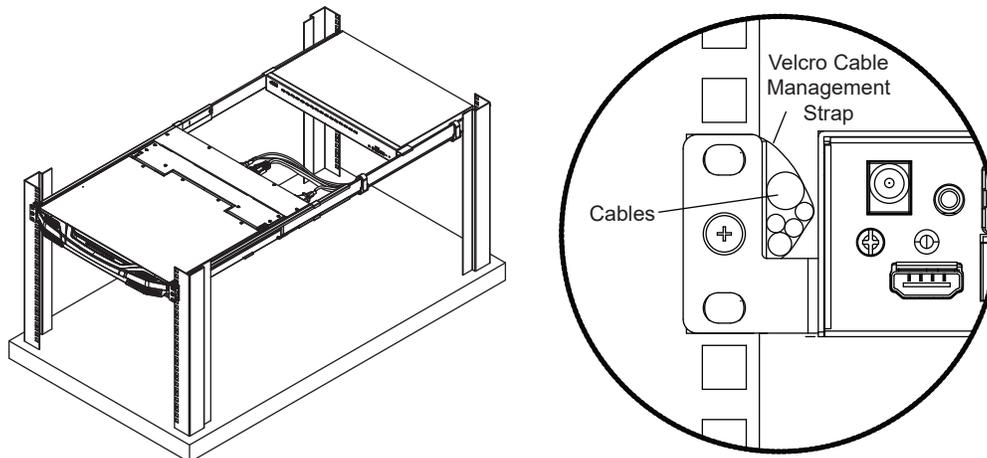
- 7** The front ears of the KVM switch are hook-shaped. Hook the front ears onto the rack, making sure that the right ear is hooked between the two Velcro management straps.



- 8** Push the KVM switch into the rack. Using two (2) M4x6 screws, stabilize the KVM switch.



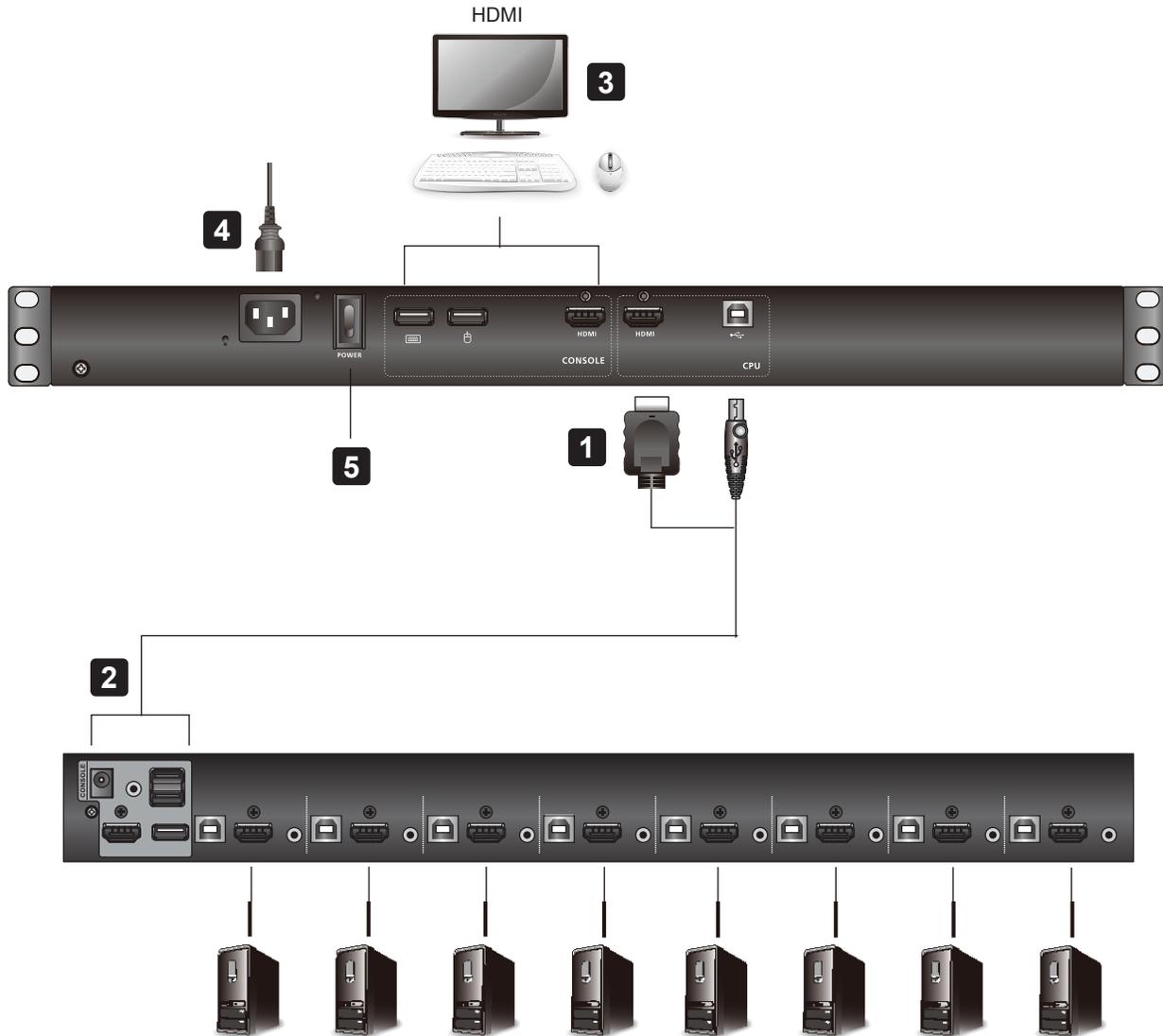
- 9** When completed, the cables should be managed between the KVM switch and the rail.



# 5. Installation

## 5.3 KVM Console Installation

To set up the B021-SWHD-K, refer to the following steps and installation diagram.



- 1** Plug the HDMI and USB Type-B connectors of a KVM cable into the KVM ports located in the CPU section on the rear of the B021-SWHD-K.
- 2** Plug the USB Type-A and HDMI connectors of the KVM cable into their respective ports of the KVM switch (or computer).
- 3** If installing an external console, plug your keyboard, mouse and monitor into their respective ports on the console section of the B021-SWHD-K.
- 4** Plug one end of the power cord into the B021-SWHD-K power socket, then plug the other end into a power source.
- 5** Turn on the power to the B021-SWHD-K.
- 6** Turn on the power to the KVM switch (and/or computers).

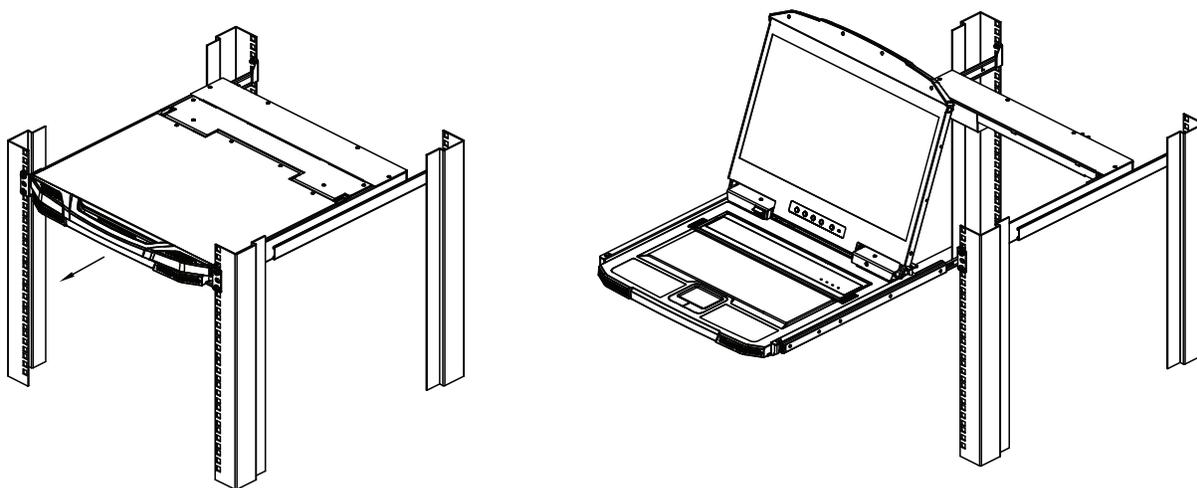
## 6. Operation

### 6.1 Opening/Closing the KVM Console

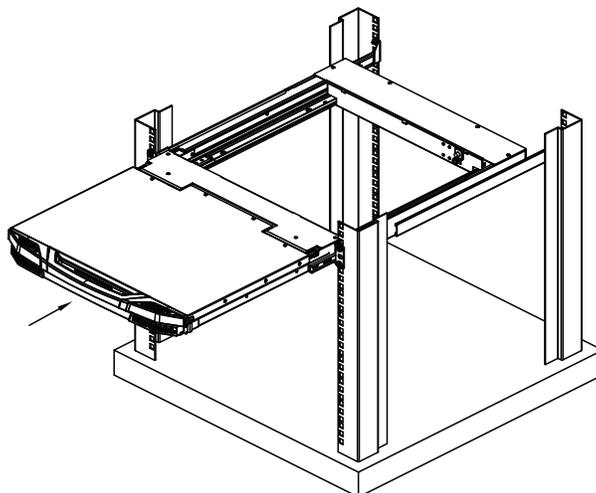
As a single-rail console, the B021-SWHD-K's LCD display module and keyboard/touchpad module can only slide in/out together.

To open or close the KVM console:

- 1** Pull the release bar on the upper handle. Slide the console module out until it clicks in place, then raise the LCD module lid.



- 2** To close the console, lower the LCD module until it lies flat, then slide the console in.



## 6. Operation

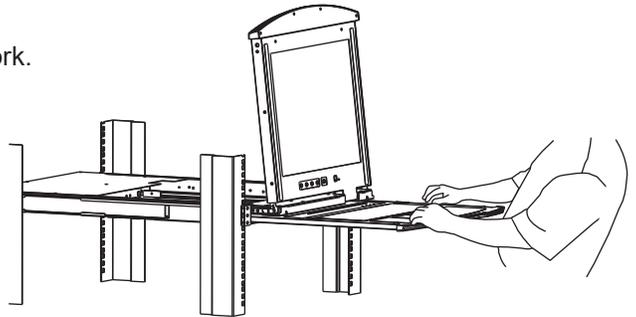
### 6.1.1 Operating Precautions



The maximum load bearing capacity of the keyboard module is 66 lb. (30 kg).

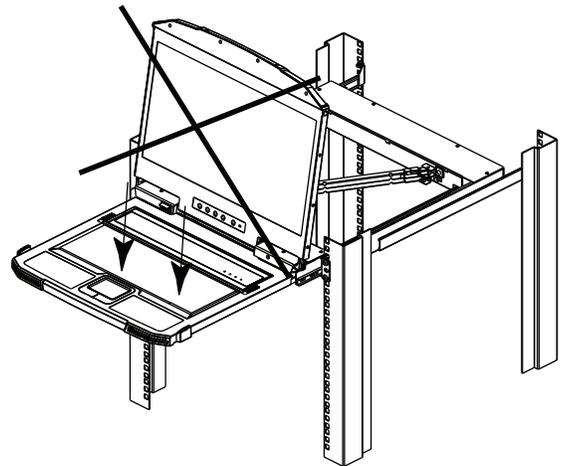
#### Correct

Rest your hands and arms lightly on the keyboard module as you work.



#### Incorrect

- DO NOT lean your body weight on the keyboard module.
- DO NOT place heavy objects on the keyboard module.



# 6. Operation

## 6.2 OSD Configuration

### 6.2.1 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 opens 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 opens the 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 settings for the LCD panel to the OSD's optimum values.</li><li>• When you have entered the LCD OSD Menu function, pressing this button exits the current menu and returns to the previous menu. Use it to leave an adjustment menu when you are satisfied with the adjustment made.</li><li>• When you are at the Main Menu, pressing this button exits the LCD OSD.</li></ul>

### 6.2.2 Adjustment Settings

An explanation of the LED OSD adjustment settings is provided 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 this problem.
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 Adjust Color selection has a submenu that lets you fine tune the RGB values.
Language	Selects the language that the OSD displays its menus in.
OSD Duration	Allows you to 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	This option is not available, as the B021-SWHD-K only has one input source option.
Reset	Resets the adjustments on all menus and submenus to factory default settings. <b>Note:</b> The language setting does not return to the factory default, but remains at the one that you have set it to.

## 6. Operation

### 6.3 Hot Plugging

B021-SWHD-K supports hot plugging – devices can be removed and added to the console by unplugging their cables from the ports without needing to shut down the console.

### 6.4 Powering Off and Restarting

If it becomes necessary to Power OFF the B021-SWHD-K (to upgrade the firmware, for example), simply turn off the power to the unit using the rear-panel power switch. To restart the B021-SWHD-K, turn the rear-panel power switch to ON.

### 6.5 Port ID Numbering and Port Selection

If you connect a KVM switch to the B021-SWHD-K, Port ID numbering and Port Selection follow the method used by the connected KVM switch. Consult your KVM switch's Owner's Manual for details.

### 6.6 Hotkeys

Key	Function	Beeps	LEDs
[Ctrl] [Alt] [Shift] [P] [C] [Enter]	Selects normal mode (pc, etc.).	2	None
[Ctrl] [Alt] [Shift] [M] [A] [C] [Enter]	Selects Mac.	2	None
[Ctrl] [Alt] [Shift] [S] [U] [N] [Enter]	Selects Sun.	2	None
[Ctrl] [Alt] [Shift] [u] [p] [g] [r] [a] [d] [e] [Enter]	Activates Firmware Upgrade Mode. <b>Note:</b> <i>This hotkey sequence only works when the firmware upgrade switch is in the Normal position. Refer to section 8.1 Firmware Upgrade Mode for more information.</i>	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). <b>Note:</b> <i>USB mouse mode [U] [M] is the default.</i>	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 text editor or word processor.	None	None
[Ctrl] [Alt] [Shift] [F11] [F] [Enter]	Set the KVM port to USB full speed.	2	None
[Ctrl] [Alt] [Shift] [F11] [L] [Enter]	Set the KVM port to USB low speed.	1	None

## 6. Operation

### Notes:

- *Press the keys in sequence – One key at a time. First [Ctrl], then [Alt], then [Shift], etc.*
- *Console selections are not saved. If the B021-SWHD-K is powered OFF, it reverts to the default setting of both consoles enabled when it is powered ON again.*
- *Either side of the keyboard can be used to invoke [Shift] [Ctrl] [Alt] hotkeys. However, when activating hotkey combinations [Ctrl] [Alt] [Shift], make sure you are using the keys on the same side of the keyboard.*
- *If the KVM switch connected to the B021-SWHD-K uses the [Ctrl] [Alt] [Shift] combination to invoke its hotkey mode, you will not be able to access any of its hotkey operations because the B021-SWHD-K will capture the combination for console selection first.*

# 7. Keyboard Emulation

## 7.1 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.

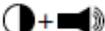
PC Keyboard	Mac Keyboard
[Shift]	Shift
[Ctrl]	Ctrl
	
[Ctrl] [1]	
[Ctrl] [2]	
[Ctrl] [3]	
[Ctrl] [4]	
[Alt]	Alt
[Print Screen]	F13
[Scroll Lock]	F14
	=
[Enter]	Return
[Backspace]	Delete
[Insert]	Help
[Ctrl] 	F15

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

# 7. Keyboard Emulation

## 7.2 Sun Keyboard

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.

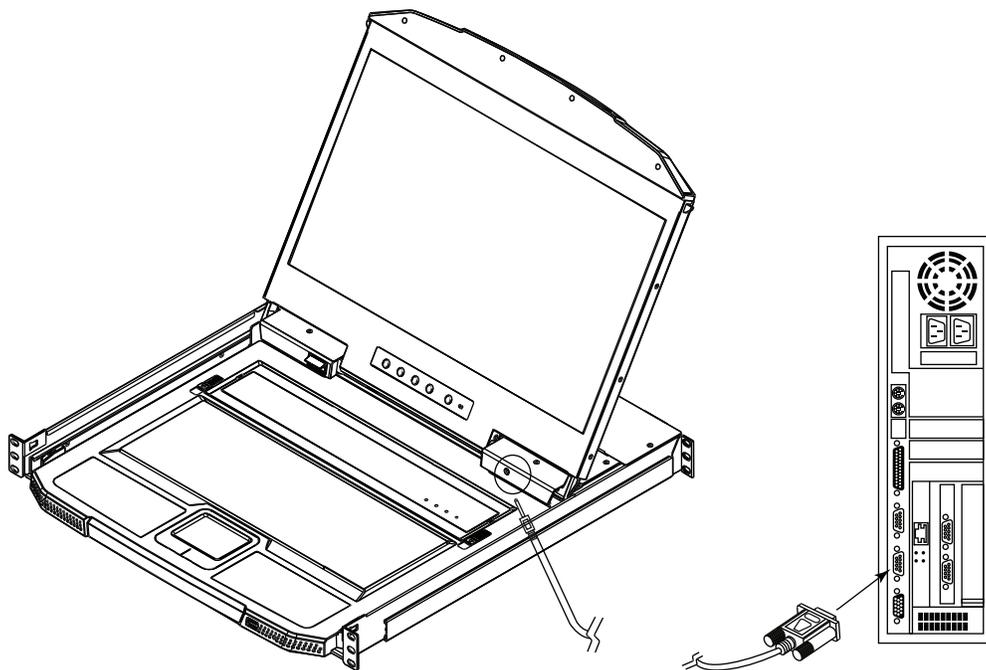
## 8. Firmware Upgrade Utility

As new firmware revisions become available for the B021-SWHD-K, firmware upgrade packages are posted on [tripplite.com](http://tripplite.com). The Windows-based Firmware Upgrade Utility (FWUpgrade.exe) provides a smooth, automated process for upgrading the B021-SWHD-K firmware.

Check [tripplite.com](http://tripplite.com) to find the latest firmware packages and related information.

To prepare for the firmware upgrade, do the following:

- 1** From a computer that is not part of your B021-SWHD-K installation, go to Tripp Lite's Technical 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 B021-SWHD-K's firmware upgrade port.



### 8.1 Firmware Upgrade Mode

The B021-SWHD-K firmware upgrade mode can be accessed by entering a hotkey sequence (see section **6.6 Hotkeys**) or sliding the firmware upgrade switch of the B021-SWHD-K to RECOVER (see section **8.4 Firmware Upgrade Failed**).

**Note:** To activate the Firmware Upgrade Mode using a hotkey sequence, the firmware upgrade switch must be set to the **Normal** position.

- 1** Using the power switch located on the rear of the console, turn off the B021-SWHD-K.
- 2** Slide the firmware switch to RECOVER.
- 3** Using the power switch located on the rear of the console, turn on the power to the B021-SWHD-K.

When the B021-SWHD-K is in Firmware Upgrade Mode, the Num Lock, Caps Lock and Scroll Lock LEDs will continually flash on and off.

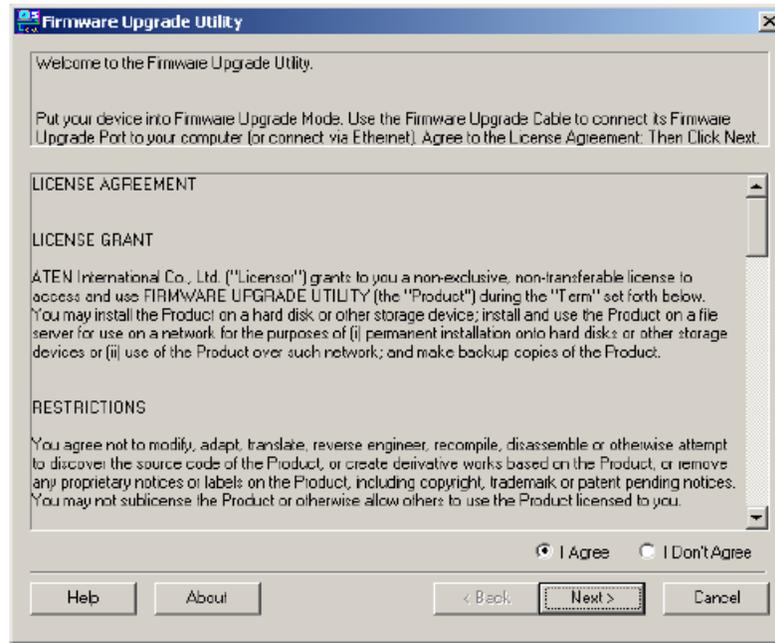
To exit the Firmware Upgrade Mode, see section **8.5 Exiting Firmware Upgrade Mode**.

# 8. Firmware Upgrade Utility

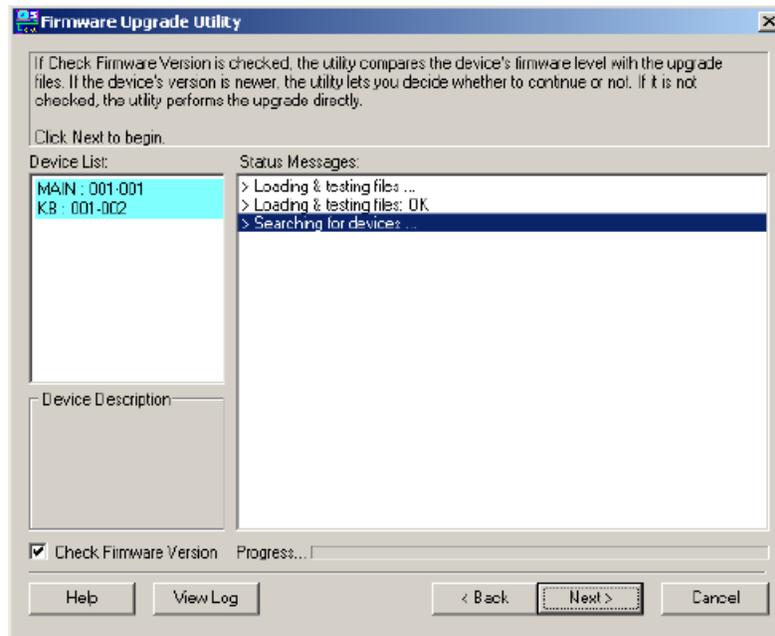
## 8.2 Performing Firmware Upgrade

- 1 With the B021-SWHD-K in Firmware Upgrade Mode, run the downloaded Firmware Upgrade Package file from your computer – either by double clicking the file icon, or opening a command line and typing the full path and filename.

The Firmware Upgrade Utility welcome screen will appear:



- 2 Read and Agree to the License Agreement (enable the “I Agree” radio button).
- 3 Click **Next**. The Firmware Upgrade Utility main screen will appear:

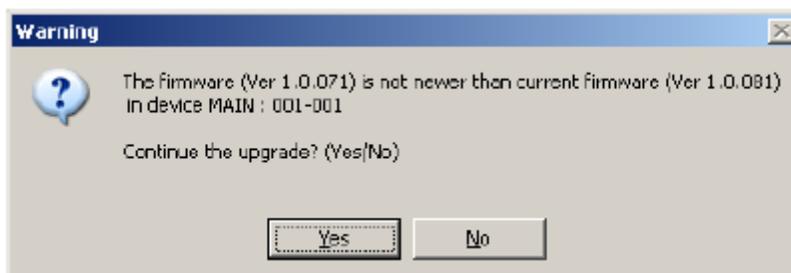


The Utility will then inspect your installation. All devices capable of being upgraded by the package will be listed in the Device List panel.

## 8. Firmware Upgrade Utility

4 Click **Next** to perform the upgrade.

If you enabled *Check Firmware Version*, the Utility compares the device's firmware level with those of the upgrade files. If it finds the device's version is higher than the upgrade version, a dialog box will appear to inform you of the situation and offer the option to continue the upgrade:

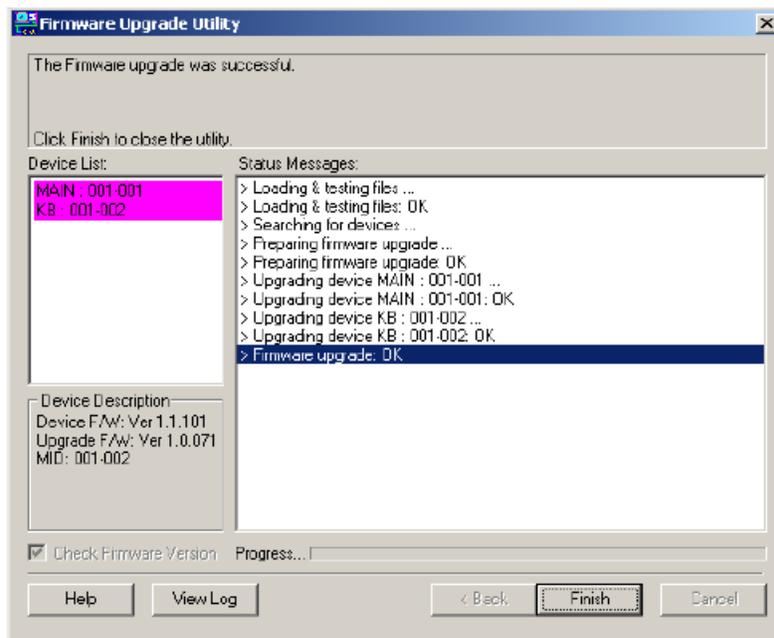


If you do not enable *Check Firmware Version*, the Utility will install the upgrade files without checking if they are a higher level.

As the upgrade proceeds, status messages will appear in the Status Messages panel and the progress toward completion will show on the progress bar.

### 8.3 Firmware Upgrade Successful

After the upgrade has completed, a screen will appear to inform you the procedure was successful:

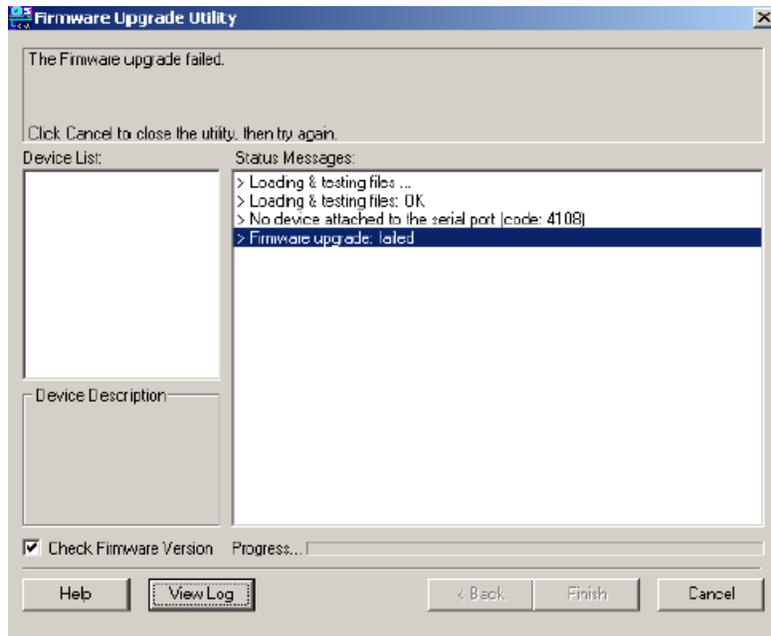


Click **Finish** to close the Firmware Upgrade Utility.

## 8. Firmware Upgrade Utility

### 8.4 Firmware Upgrade Fail

If the firmware upgrade fails (the Upgrade Succeed screen does not appear), you can recover the situation.



Possible reasons for firmware upgrade failure include:

- When a firmware upgrade was manually aborted.
- 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 recover a failed firmware upgrade, do the following:

- 1** Power off the unit.
- 2** Connect the firmware upgrade cable to its firmware upgrade port.
- 3** Slide the firmware upgrade switch to the **Recover** position.
- 4** Power the unit back on and repeat the upgrade procedure (see section **8.2 Performing Firmware Upgrade**).
- 5** After the unit has been successfully upgraded, power it off, then slide the firmware upgrade switch back to the **Normal** position.
- 6** Power the unit back on again.

### 8.5 Exiting Firmware Upgrade Mode

To exit the Firmware Upgrade Mode, do the following:

- 1** Slide the firmware upgrade switch to the **Normal** position.
- 2** Power OFF and restart the B021-SWHD-K according to the instructions given in section **6.4 Powering Off and Restarting**.

# 9. Appendix

## 9.1 Technical Support

For online technical support – including troubleshooting, documentation, and software updates:

<https://www.tripplite.com/support/technical-support-request>

For telephone support, contact technical support at 773.869.1234

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

- Product model number, serial number and date of purchase.
- Your computer configuration, including the 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 in resolving the issue.

## 9.2 Specifications

<b>Computer Connections</b>	
Direct	1
Console Selection	Hotkey
<b>Connectors</b>	
External Console Ports	1 x HDMI, Female 2 x USB Type-A ,Female
KVM Ports	1 x HDMI, Female 1 x USB Type-B, Female
External Mouse / Peripheral	1 x USB Type-A, Female (Front)
Firmware Upgrade	1 x 3.5 mm Audio Jack, Female (Back)
Power	1 x IEC 60320/C14
<b>Switches</b>	
Reset	1 x Semi-Recessed Push Button
Firmware Upgrade	1 x Slide
Power	1 x Rocker
LCD Power	1 x Push Button
LCD Adjustment	4 x Push Button
<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>Emulation</b>	
Keyboard / Mouse	USB
<b>Video</b>	
Input Video Resolution	Up to 1920 x 1200 @ 60 Hz; 1920 x 1080 @ 60Hz, DDC2B

## 9. Appendix

<b>Panel Spec</b>	
LCD Module	18.5" TFT-LCD
Resolution	1920 x 1080 @ 60 Hz
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	16.77M colors
Luminance	350 cd/m <sup>2</sup>
<b>Maximum Input Power</b>	
Rating	100–240V AC, 50–60 Hz, 1A
Power Consumption	AC110V: 23.3W:124BTU AC220V: 23.9W:127BTU
<b>Environmental</b>	
Operating Temperature	32°F to 104°F (0° to 40°C)
Storage Temperature	-4°F to 140°F (-20° to 60°C)
Humidity	0–80% RH, Non-Condensing
<b>Physical Properties</b>	
Housing	Metal + Plastic
Weight	19.85 lb. (9.01 kg)
Dimensions [L x W x H]	18.92 x 18.78 x 1.69 in. (48.06 x 47.70 x 4.28 cm)
Body Dimensions [L x W x H]	17.6 x 17 x 1.7 in. (44.92 x 43.00 x 4.28 cm)

### Notes:

- For some rack-mount products, please note that the standard physical dimensions of HxWxD are expressed using a HxWxL format.
- Body Dimensions exclude I/O ports, handles and mounting brackets.

## 9.3 Troubleshooting

Symptom	Action
"Ghost images" appear on the external monitor.	The distance between the external console and the B021-SWHD-K is too great. The maximum HDMI cable distance should not exceed 65 ft. (20 m) and in some cases, may need to be shorter. Replace the HDMI cable with one of an appropriately shorter length.
Some characters entered 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.
The special keys on the Sun external keyboard cannot control Sun computers.	Use Sun keyboard emulation keystrokes (see section <b>7.2 Sun Keyboard</b> ) to achieve all Sun keyboard functions.

# 10. Warranty and Product Registration

## 1-Year Limited Warranty

TRIPP LITE warrants its products to be free from defects in materials and workmanship for a period of one (1) year from the date of initial purchase.

TRIPP LITE's obligation under this warranty is limited to repairing or replacing (at its sole option) any such defective products. To obtain service under this warranty, you must obtain a Returned Material Authorization (RMA) number from TRIPP LITE or an authorized TRIPP LITE service center. Products must be returned to TRIPP LITE or an authorized TRIPP LITE service center with transportation charges prepaid and must be accompanied by a brief description of the problem encountered and proof of date and place of purchase. This warranty does not apply to equipment which has been damaged by accident, negligence or misapplication or has been altered or modified in any way.

EXCEPT AS PROVIDED HEREIN, TRIPP LITE MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Some states do not permit limitation or exclusion of implied warranties; therefore, the aforesaid limitation(s) or exclusion(s) may not apply to the purchaser.

EXCEPT AS PROVIDED ABOVE, IN NO EVENT WILL TRIPP LITE BE LIABLE FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OF THIS PRODUCT, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE. Specifically, TRIPP LITE is not liable for any costs, such as lost profits or revenue, loss of equipment, loss of use of equipment, loss of software, loss of data, costs of substitutes, claims by third parties, or otherwise.

## PRODUCT REGISTRATION

Visit [tripplite.com/warranty](http://tripplite.com/warranty) today to register your new Tripp Lite product. You'll be automatically entered into a drawing for a chance to win a FREE Tripp Lite product!\*

\* No purchase necessary. Void where prohibited. Some restrictions apply. See website for details.

## Regulatory Compliance Identification Numbers

For the purpose of regulatory compliance certifications and identification, your Tripp Lite product has been assigned a unique series number. The series number can be found on the product nameplate label, along with all required approval markings and information. When requesting compliance information for this product, always refer to the series number. The series number should not be confused with the marketing name or model number of the product.

## WEEE Compliance Information for Tripp Lite Customers and Recyclers (European Union)

 Under the Waste Electrical and Electronic Equipment (WEEE) Directive and implementing regulations, when customers buy new electrical and electronic equipment from Tripp Lite they are entitled to:

- Send old equipment for recycling on a one-for-one, like-for-like basis (this varies depending on the country)
- Send the new equipment back for recycling when this ultimately becomes waste

Tripp Lite has a policy of continuous improvement. Specifications are subject to change without notice. Photos and illustrations may differ slightly from actual products.



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