Quick Start Guide

NetDirector® 1U Rackmount KVM Switches with IP Access

Models: B022-U08-IP, B022-U16-IP

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1. FCC Information

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

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

2. User Notice

All information, documentation and specifications contained in this guide 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 guide 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.

3. Package Contents

This package consists of:

- B022-U08-IP or B022-U16-IP KVM Switch
- 6 ft. USB/PS2 Combo KVM Cable Kits (x2)
- USB/PS2 Combo Console Cable Kit
- RJ11 to DB9 Firmware Upgrade Cable
- Rackmount Hardware
- External Power Supply
- Rubber Feet
- CD with Owner's Manual, Quick Start Guide and Device Files
- Quick Start Guide

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 guide thoroughly and follow the installation and operation procedures carefully to prevent any damage to the switch or to any other devices in the installation.

4. Introduction



4.1 Features

- 1U Rackmount KVM Switch with built-in IP access.
- Connect either USB or PS/2 computers using P778-Series USB/PS2 Combo KVM Cable Kits – no need for separate cable kits.
- Control up to 8 (B022-U08-IP) or 16 (B022-U16-IP) computers on a single KVM switch.
- Remotely access computers via LAN, WAN or Internet via the Windows™ or Java browser clients.
- AP Windows and Java Clients allow the KVM to be remotely accessed via the network without going through a browser.
- External USB 1.1 port allows USB peripheral devices to be shared amongst connected computers.
- Grayscale feature allows you to view remote sessions in black and white, reducing the amount of data traveling over the network and improving keyboard/mouse response time over IP.
- Web management interface, OSD and toolbars provide convenient, user-friendly operation.
- 3-level security (Admin, User and Select) – up to 64 accounts can be created.
- Panel Array Mode – remotely monitor multiple ports at the same time.
- Message board feature allows users who are logged in at the same time to communicate with each other and manage port access.
- CD includes a Windows-based log server that records events on the installation and writes them to a searchable database.
- Supports RADIUS and LDAP/S authentication.
- Flash firmware upgradable via network and included firmware upgrade cable.
- Supports both IPv4 and IPv6.
- Supports Link Local IPv6 Address and IPv6 Stateless Auto configuration protocol.
- Web Management Interface, Remote OSD and Local OSD can be displayed in English, Spanish, French, German and Japanese.
- Advanced encryption technologies: 128-bit SSL, 128-bit RC4, 1024-bit RSA, 56-bit DES, 256-bit AES, 168-bit 3DES.
- Video resolutions up to 1920 x 1080, DDC2B are supported at the local console. Video resolutions up to 1920 x 1080 @ 60 Hz, 24-bit color depth are supported at the remote console.

4.2 System Requirements

4.2.1 External Console

- A VGA, SVGA or MultiSync monitor capable of displaying the highest resolution provided by any computer in the installation.
- PS/2 or USB keyboard and mouse.

4.2.2 Computers

The following equipment must be installed on each computer:

- A VGA, SVGA or MultiSync video graphics card with an HD15 port.

Either:

- PS/2 mouse and keyboard ports (6-pin Mini-DIN).
- USB port.

4.2.3 Remote Console

- For best results, computers that remotely access the KVM switch should have at least a Pentium III 1 GHz processor.
- Users who want to access the KVM switch with the Windows Client must have DirectX 8.0 or higher installed. DirectX is available for free download from Microsoft's Website: http://www.microsoft.com/downloads.
- Users who want to access the KVM switch with the Java Client must have Sun's Java 6 (update 3 or higher) runtime environment installed. Java is available for free download from the Sun Java Website: http://java.com.
- For best results, a network transfer speed of at least 128 Kbps is recommended.
- Browsers must support 128-bit data encryption.
- To run the Log Server, you must have the Microsoft Jet 0LED8 4.0 (or higher) driver installed.

4.2.4 Supported Browsers

Browser	Versions Supported
Internet Explorer	6 and higher
Firefox	1.5 and higher
Mozilla	1.7 and higher
Safari	4.0 and higher
Opera	9.0 and higher
Netscape	8.1 and higher

4.2.5 Custom KVM Cable Kits

The KVM switch uses custom P778-Series USB/PS2 Combo KVM Cable Kits, which can be used to connect to a computer with either USB or PS/2 connectors. One cable kit is required for each connected computer.

4.2.6 Operating Systems

Supported operating systems are shown in the table, below:

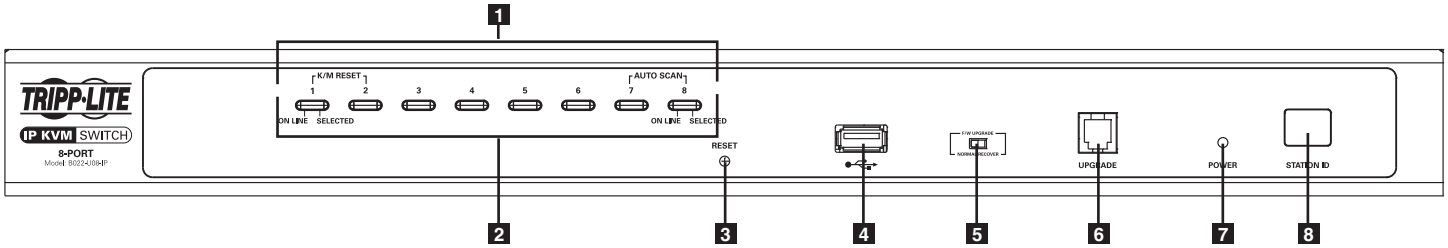
Operating System	Versions Supported
Windows	2000 and higher
Linux RedHat	7.1 and higher
Linux Fedora	Core 5 and higher
Linux SuSE	9.0 and higher
Linux Mandriva (Mandrake)	9.0 and higher
UNIX AIX	3.51 and higher

Operating System	Versions Supported
UNIX Free BSD	3.51 and higher
UNIX Sun	Solaris 8 and higher
Novell Netware	5.0 and higher
Mac	OS 9 and higher
DOS	6.2 and higher

4.3 Components

4.3.1 Front View

Note: *The diagram below shows the B022-U08-IP. The B022-U16-IP will be the same, except for the number of KVM ports and KVM pushbuttons. Also, an Auto Scan can be initiated on the B022-U16-IP by pressing pushbuttons 15 and 16 instead of 7 and 8.*



1 **Port Selection Pushbuttons:** These buttons toggle between the computers attached to the corresponding KVM ports.

- Simultaneously pressing and holding buttons 1 and 2 for three seconds will perform a keyboard / mouse reset.
- Simultaneously pressing and holding buttons 7 and 8 (for B022-U08-IP) or 15 and 16 (for B022-U16-IP) for three seconds will initiate an Auto Scan.

2 **Port LEDs:** The Port LEDs are built into the Port Selection Pushbuttons.

- An Online LED on the left side of the pushbutton will illuminate Orange to indicate that a powered-on computer is connected to the corresponding port.
- A Selected LED on the right side of the pushbutton will illuminate Green to indicate that the corresponding port has the focus of the KVM.

3 **Reset Button:** Press this recessed button with a thin object to perform a system reset.

4 **USB Peripheral Port:** A USB 1.1 port is provided for the sharing of USB peripherals among connected computers (e.g. flash drive, CD-ROM drive, etc.).

Note: *USB peripherals can only be shared among computers that are connected to the KVM switch via the USB connectors on the P778-Series USB/PS2 Combo KVM Cable Kit.*

5 **Firmware Upgrade Switch:** During a firmware upgrade, as well as normal operation, this switch should be in the NORMAL position. If a firmware upgrade does not perform successfully, this switch is flipped to the RECOVER position during the firmware upgrade recovery process.

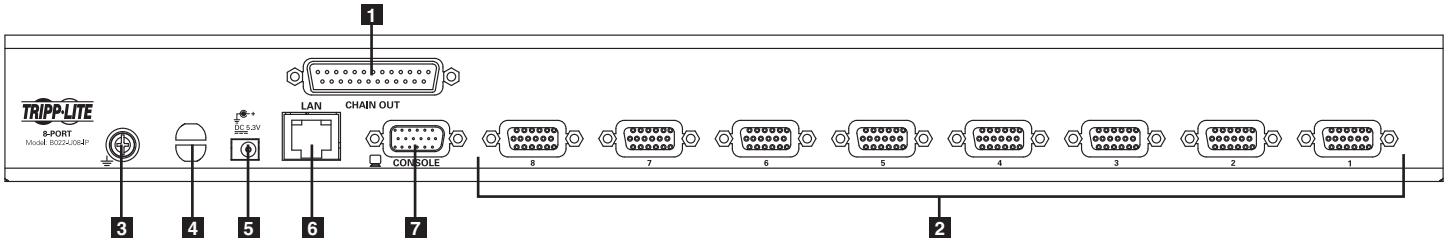
6 **Firmware Upgrade Port:** The RJ11 connector on the included firmware upgrade cable connects to the KVM switch here.

7 **Power LED:** The Power LED illuminates blue to indicate the unit is receiving power.

8 **Station ID LED:** The Station ID LED will display the number of the station that currently has the console's focus.

4.3.2 Rear View

Note: *The diagram below shows the B022-U08-IP. The B022-U16-IP will be the same, except for the number of KVM ports.*



1 **Daisychain-Out Port**

2 **KVM Ports:** The custom wired KVM cable kits that connect to the computers plug in here.

3 **Grounding Terminal:** The wire (user provided) used to ground the unit connects to the KVM here.

4 **Cable Tie Slot:** A cable tie can be routed through this slot in order to tie the connected cables together for organizational purposes.

5 **Power Jack:** The included power supply connects to the KVM here.

6 **LAN Port:** The cable that connects the KVM switch to a LAN, WAN or Internet plugs in here.

7 **Console Port:** The included USB/PS2 Combo Console Cable Kit connects to the KVM switch here, allowing you to attach a VGA monitor and USB or PS/2 keyboard/mouse.

5. Installation

5.1 General Safety Instructions ⚠

- 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.
- This device is designed for IT power distribution systems with up to 230V phase-to-phase voltage.
- The device is equipped with a 3-wire grounding type plug. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not attempt to defeat the purpose of the grounding-type plug. Always follow your local/national wiring codes.
- Do not allow anything to rest on the power cord or cables. Route the power cord and cables so that they cannot be stepped on or tripped over.
- 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.
- Consideration should be given to the connection of equipment to the supply circuit, and what effect overloading the supply circuit might have on overcurrent protection and supply wiring.
- To help protect your system from sudden, 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; be sure that nothing rests on any cables.
- When connecting or disconnecting power to hot-pluggable power supplies, observe the following guidelines:
  - Install the power supply before connecting the power cable to the power supply.
  - Unplug the power cable before removing the power supply.
  - If the system has multiple sources of power, disconnect power from the system by unplugging all power cables from the power supplies.
- 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.
- 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.

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-unit rack assembly, make sure that the temperature will not exceed the maximum rated ambient temperature.
- 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.
- Always load the rack so that a hazardous condition is not created due to uneven loading.
- 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% 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.
- Do not connect the RJ11 connector marked “Upgrade” to a public telecommunication network.
- **Caution!** Slide/Rail (LCD KVM) mounted equipment is not to be used as a shelf or a work space.



CAUTION!
Slide/rail-mounted equipment is not to be used as a shelf or a workspace.

5. Installation *(continued)*

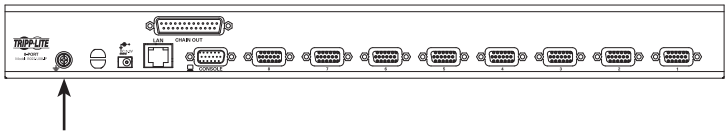
5.2 Rack Mounting Instructions

Standard Rack Mounting

1. Depending on whether you want to mount the KVM switch to the front or back of the rack, attach the included rackmount brackets to the front or rear sides of the KVM switch.
2. Using user-supplied screws, mount the rackmount brackets of the KVM switch to the rack.

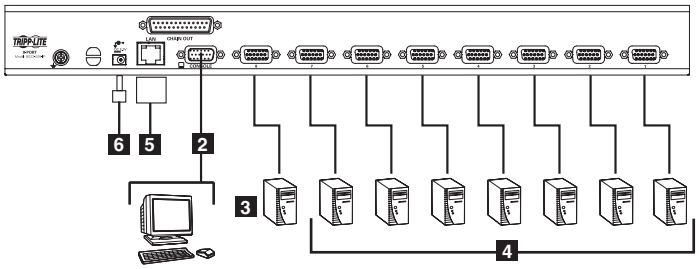
5.3 Grounding

To prevent damage to your installation, it is important that all devices are properly grounded. Using a user-supplied grounding wire, ground the KVM switch by connecting one end of the wire to the grounding terminal on the unit, and the other end of the wire to a suitably grounded object.



5.4 Installation

To install your KVM switch, refer to the following steps and installation diagram.



1. Power OFF all computers that are being connected to the KVM switch.
2. Add an external console to the KVM by connecting the included USB/PS2 console cable kit to the console port on the back of the unit, and then connecting an external monitor (HD15), keyboard (USB or PS/2) and mouse (USB or PS/2) to the connectors on the cable kit.
3. Connect a P778-Series USB/PS2 Combo KVM Cable Kit between an available KVM port on the back of the unit and a computer/server. P778-Series Cable Kits allow you to connect to a computer with either USB or PS/2* keyboard/mouse ports, without the need for separate cables.

   Note: *The distance between the KVM and the connected computer must not exceed 33 ft. (10 m).*
4. Repeat step 3 for each additional computer you wish to connect.
5. Connect the LAN port on the back of the unit to the network using Cat5e/6 cable.
6. Connect the included external power supply to the KVM switch, and then plug it into a Tripp Lite Surge Suppressor, PDU or Uninterruptible Power Supply (UPS).
7. After the KVM switch powers up, power on the connected computers.

*When connecting to computers using the PS/2 connectors of a P778-Series Cable Kit, the **Mouse Sync Mode** setting must be set to Manual in order to access the computer over IP. If **Mouse Sync Mode** is set to **Automatic**, you will not have mouse functionality when accessing that computer over IP. This setting is set to **Manual** by default.

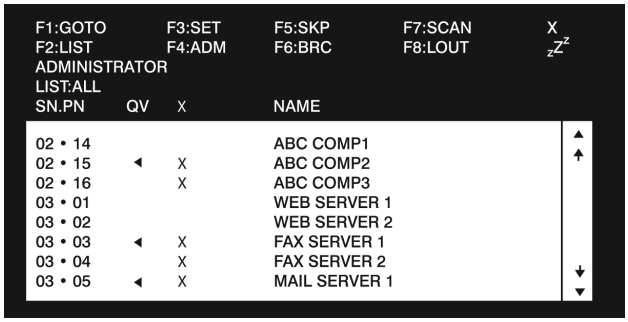
5.5 Network Setup-IP Address Configuration

In order to configure a fixed IP address, you will need to access the KVM switch in one of four ways; *Local Console, IP Installer*, *Browser* or *Non-Browser Clients.*

5.5.1 Local Console

Note: *The local console OSD only allows you to configure IPv4 network settings. For IPv6, access the Web Management Interface or Remote Session OSD.*

1. When accessing the KVM switch for the first time, a prompt will appear asking for a *Username and Password*. The default *Username* is **administrator**, and the default *Password* is **password**. For security purposes, it is strongly recommended that you change the username and password on this account to something unique. When you have entered your username and password, the OSD will appear with the following page displayed.



5.5.1 Local Console *(continued)*

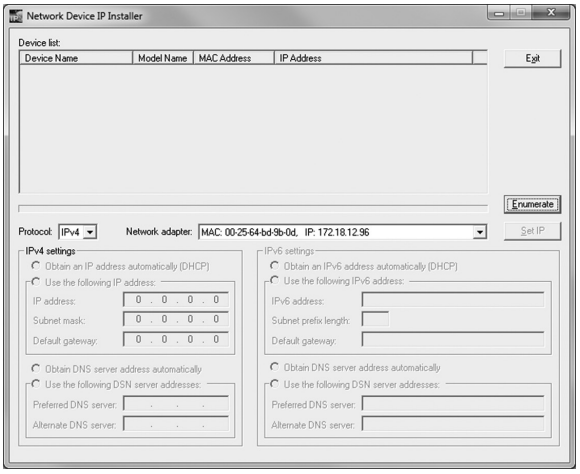
2. Press the **[F4]** key to bring up the OSD Admin page.
3. In the OSD Admin page, highlight *SET IP ADDRESS* and press the **[Enter]** key.
4. *DHCP* – The first field allows you to enable or disable DHCP. When enabled, the KVM is assigned an IP address by the DHCP server. This setting is enabled by default. To disable the *DHCP* setting and set up a fixed IP address, press the **[Spacebar]** key. Once the DHCP is disabled, you will be allowed to edit the remaining fields in the SET IP ADDRESS screen.
5. In the remaining fields, enter in the IP address, subnet mask and default gateway you want to assign to the KVM switch.
6. Press the **[Esc]** key to exit the *SET IP ADDRESS* screen, and to pull up a prompt asking if you wish to save the settings you just entered. If you do not wish to save the settings, press the **[N]** key. If you do wish to save the settings, press the **[Y]** key. Upon pressing the **[Y]** key, the settings will be saved and the KVM will be reset.

5.5.2 IP Installer

The CD that comes with the product includes a Windows-based *IP Installer* utility that can be used to obtain and edit the IP address assigned to the KVM. To use the *IP Installer* utility, the computer you are using must be running a Windows operating system, and must be on the same network as the KVM. Also, the *IP Installer* setting in the *Network* page of the Web Management Interface must be set to *Enabled*, which it is by default.

Note: *The* IP Installer *settings can only be accessed via the browser-based Web Management Interface. They are not accessible in the* Remote OSD.

1. Save the *IP Installer.exe* file from the CD to a desired location on a computer that is on the same network as the KVM.
2. Locate the *IP Installer.exe* file that you just saved and double-click on it. A screen similar to the one below will appear:



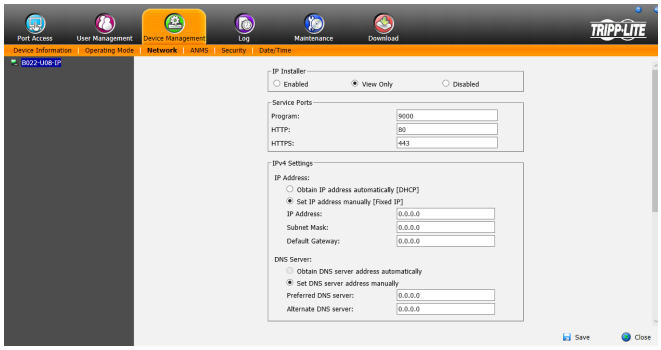
3. Select your KVM from the *Device List*.

   Note: *If the list is empty, or your device doesn't appear, click the* Enumerate *button to refresh the* Device List*. If there is more than one device in the list, use the MAC address on the bottom of your unit to determine the desired device.*
4. To assign a fixed IP address, check the *Use the following IP address* checkbox and fill in the *IP Address, Subnet Mask,* and *Default Gateway* fields with information appropriate for your network (IPv4 or IPv6).
5. Click the *Set IP* button to apply the changes to the unit. The new IP address will appear in the *Device List*.
6. Click the *Exit* button to exit the *IP Installer* utility.

5.5.3 Browser/Non-Browser Clients

By default, the KVM switch is set to have an IP address assigned automatically via DHCP server. If this is the case, you will need to obtain the IP address from your network administrator. If connected to a network without a DHCP server, it boots with a default IP address. The default IPv4 and IPv6 addresses can be found on the sticker on the bottom of the unit.

1. Enter the unit's IP address into your web browser.
2. You may be prompted by a screen stating that there is a problem with this website's security certificate. Click on the option to continue to the website anyway. (See *Web Browser Login* section for details on installing the security certificate)
3. You will be brought to a login page. Enter the default User Name *(administrator)*, and the default Password *(password)*. The Web Management Interface will open upon entering the User Name and Password. It is strongly recommended that you change these to a unique username and password (see *5.5.4 Changing the Super Administrator Login* for instructions).
4. Click on the *Device Management* icon at the top of the page, then click "Network" in the sub-section to open the *Network* settings page.



5.5.3 Browser/Non-Browser Clients *(continued)*

5. By default, the *Obtain IP address automatically [DHCP]* checkbox is checked. To set a fixed IP address, check the *Set IP address manually [Fixed IP]* check box in the IPv4 or IPv6 settings section, depending on your network.
6. The *IP Address, Subnet Mask* and *Default Gateway* fields will be activated upon checking the *Set IP address manually [Fixed IP]* checkbox. Fill in these fields with information appropriate for your network.
7. As with the IP Address settings, the DNS Server settings can be obtained automatically or assigned manually. To manually enter these settings, check the *Set DNS server address manually* checkbox and fill in the *Preferred DNS server* and *Alternate DNS server* fields with information appropriate for your network.

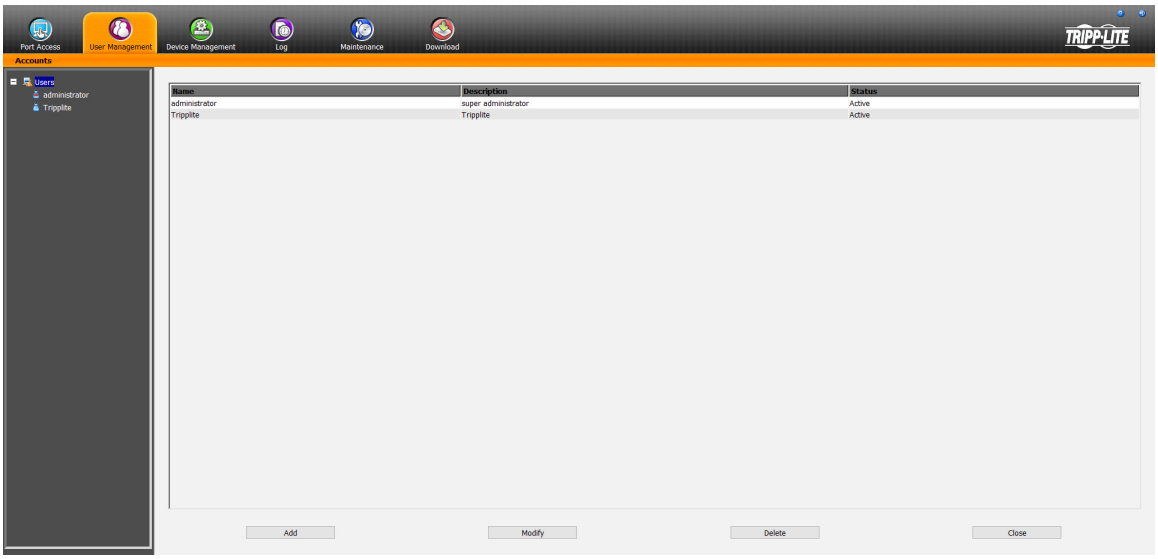
   Note: *The* Alternate DNS server *field is optional.*
8. When you have entered the IP Address and DNS Server settings, click the *Save* button. When you log out, the unit will be reset and your network changes will be applied.

See the *Network* section in the Owner's Manual for complete information on the rest of the settings in this page.

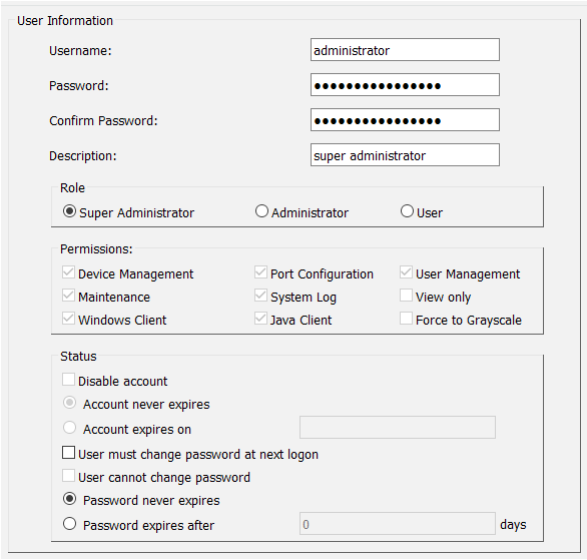
5.5.4 Changing the Super Administrator Login

To change the default Super Administrator Username and Password, do the following:

1. At the top of the OSD page, click *User Management*.
   Since this is the first time the page is being accessed, only the Super Administrator appears:



2. Click Administrator in the left panel; or, select Administrator in the central panel and click the Modify button at the bottom of the page.
   The *User Information* page appears:



6. KVM Operation

6.1 Local Console Login

When accessing the console KVM switch for the first time, a prompt will appear asking for a *username* and *password*. The default *username* is **administrator**, and the default *password* is **password**. For security purposes, it is strongly recommended that you change the username and password on this account to something unique. Once the KVM has been set up and user accounts have been created, the login prompt will only appear when a user logs out of the KVM. When you have entered your username and password, the OSD will appear with the following page displayed.



Note: *1. The screenshot depicts the Administrator's Main Screen. The User Main Screen does not have the F4 and F6 functions, since they can't be accessed by ordinary Users and are reserved for the Administrator.*

2. OSD always starts in List view, with the highlight bar at the same position it was when the OSD was last closed.

3. Only the ports that have been set accessible by the Administrator for the currently logged in User are visible.

*4. If the port list is collapsed into stations, simply click on the plus sign next to the desired station number, or highlight the desired station number and hit the **[Enter]** key.*

6.2 Local Console Port Access

Once logged into the KVM, you can access connected computers via the local console using the *Local Console OSD, Local Console Pushbuttons* or *Hotkey Commands*.

6.2.1 Local Console OSD Invocation Sequence

Once logged into the KVM switch and accessing a connected computer, you will need to use one of two sequences to re-open the OSD Main Menu; **[Scroll Lock, Scroll Lock]** or **[Ctrl, Ctrl]**. The default OSD invocation sequence is **[Scroll Lock, Scroll Lock].**

6.2.2 Local Console OSD Navigation

When in the *Local Console OSD*, you can use your keyboard and mouse to access its features.

- To close out of the *Local Console OSD*, click the **[X]** at the upper right corner of the OSD or press the **[Esc]** key.
- To logout, press the **[F8]** key, click the **F8** at the top of the OSD, or click the **zZz** symbol in the upper right hand corner of the OSD.
- To move through the OSD list one line at a time, click the up and down triangle symbols (▲,▼) or use the [↑] and [↓] keyboard keys. If there are more entries than appear on the screen, the screen will scroll.
- To move up or down one screen at a time, click the Up and Down Arrow symbols (↑,↓), or use the **[Pg Up]** and **[Pg Dn]** keyboard keys. If there are more entries than appear on the screen, the screen will scroll.
- To activate a port, double-click it, or highlight it and press the **[Enter]** key. Once a port is accessed, the OSD will close and the screen of the computer connected to the port will be displayed.

6.3 Logging Into the KVM over IP

There are three methods that can be used to connect to the KVM switch over IP; *Web Browser, AP Windows Client and AP Java Client.*

6.3.1 Browser Login

The B022-Series KVM Switches can be accessed via Internet browser from any platform that has the Java Runtime Environment 6, Update 3, or higher installed. If you don't already have the required JRE installed, it is available for free download from the Java web site: www.java.com

Note: *Windows 7 users must run Internet Explorer as an administrator for the Active X control to work properly. If you don't run Internet Explorer as an administrator, you will not be able to access the connected computers.*

To access the switch via browser, do the following:

1. Open the browser and specify the IP address of the B022-Series KVM Switch you want to access, as given to you by your system administrator.

   Note: *For security purposes, a login string may have been set by the administrator. If so, you must include a forward slash and the login string along with the IP address when you log in. (For example, a computer with a login string of B022-U08-IP would have a URL such as 192.168.0.100/B022-U08-IP).*

2. When you try to log into the device from your browser, a Security Alert message appears to inform you that the device's certificate is not trusted, and asks if you want to proceed. The certificate can be trusted, but the alert is triggered because the certificate's name is not found on Microsoft's list of Trusted Authorities.

   You have two options:

   - If you are working on a computer other than your own, accept the certificate for just this session by clicking *Yes*.
   - If you are working at your own computer, install the certificate. After the certificate is installed, it will be recognized as trusted. To install the certificate, do the following:

     a) In the Security Alert dialog box, click *View Certificate*. The Certificate Information dialog box appears.

     Note: *You may need to run Internet Explorer as an Administrator in order to view and install the certificate.*

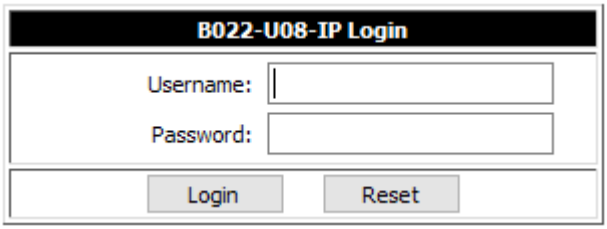
     b) Click *Install Certificate*.

     c) Follow the Installation Wizard to complete the installation. Unless you have a specific reason to choose otherwise, accept the default options.

     d) When the Wizard presents a caution screen, click *Yes*.

     e) Click *Finish* to complete the installation and click *OK* to close the dialog box. The certificate is now trusted.

   Upon installing the certificate or accepting the unrecognized certificate for the current session, the browser login dialog box appears.



3. Provide a valid Username and Password (set by the KVM switch's administrator), and click Login to bring up the OSD Main Page.

   Note: *If you supply an invalid login, the authentication routine will return an Invalid Username or Password message. If you see this message, log in again being careful to enter the correct Username and Password.*

6.3.2 AP Windows Client Login

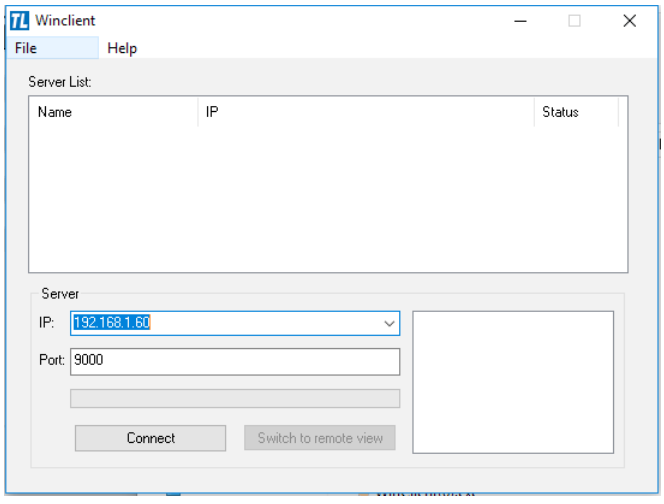
In some cases, the Administrator may not want the B022-Series KVM Switches to be available via browser. The Windows AP Client allows Windows systems users access to the KVM switch without having to go through a browser.

The AP Windows Client can be found in the Download Section of the OSD or on the CD that came with your B022-Series KVM Switch. If you do not have access to the CD, and browser access to the KVM switch has already been disabled, you will need to obtain the file from your system administrator. Once you have saved the AP Windows Client, go to its location and double-click the WinClient.exe icon to bring up the Windows Client Connection Screen.

Notes:

1. If you have trouble opening the AP Windows Client, save it to your desktop and try again.

2. When accessing the AP Windows Client for the first time, you will be prompted to provide a serial number. This serial number can be found on the CD included with your KVM.



6.3.2 AP Windows Client Login *(continued)*

The Connection Screen

A description of the contents of the Connection Screen is given in the following table:

Item	Description
Menu Bar	The Menu Bar contains two menus; File and Help. The File Menu allows the operator to Create, Save, and Open Work files.
Server List	Each time the WinClient.exe file is run, it searches the User's LAN segment for B022-Series KVM Switches, and lists the ones it finds in this box. Double-click on any of the units in this list to connect to it. ***Note:*** *For a switch to show up in the Server List, the Enable Device List check box in the Operating Mode page (see Operating Mode section under Device Management in OSD Operation for details) must be checked and the Program service port in the Network page (see Network section under Device Management in OSD Operation for details) must be set to the same number as in the AP Windows Client Port field.*
Server	This area is used when you want to connect to a B022-Series KVM Switch at a remote location. • Click on the IP drop-down and select an address from the list. If the address you want is not listed, key in the target IP address in the IP field, and its port number in the Port field. • When the IP address and port number have been specified, click Connect to bring up a login dialog box. Provide a Username and Password as provided by your system administrator and click OK to establish a connection with the B022-Series KVM Switch. • When you have finished with your session, click Disconnect to end the connection.
Message List	Lists status messages regarding the connection to the B022-Series KVM Switch.
Switch to Remote View	Once a remote connection with a B022-Series KVM Switch has been established, this button becomes active. Click it to switch to the KVM Switch's Main OSD Page.

The File Menu

The *File Menu* allows the operator to *Create, Save,* and *Open Work Files*. A *Work File* consists of all the information specified in a Client session. This includes the items in the *Server List* and *Server IP List*.

Whenever a user runs the Client program, it opens with the values contained in the current *Work File*, i.e. the values that were in effect when the program was last closed.

The *File* menu consists of four items:

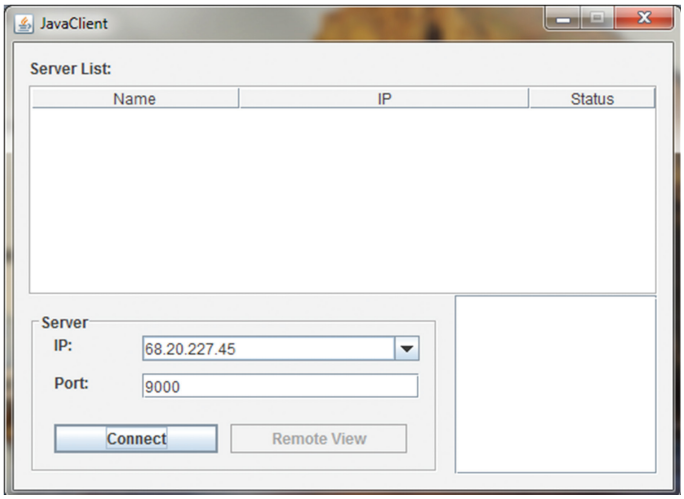
Item	Description
New	Allows the user to create a named work file so that its values will not be lost and will be available for future use
Open	Allows the user to open a previously saved work file and use the values contained in it
Save	Allows the user to save the values presently in effect as the current work file
Exit	Exits the AP Windows Client

6.3.3 AP Java Client Login

In those cases in which the Administrator does not want the B022-Series KVM Switch to be available via browser and the remote user is not running Windows, the AP Java Client provides access to the KVM switch.

After downloading the AP Java Client, go to the location on your hard disk where you downloaded the program and double-click on it to bring up the connection screen. The AP Java Client connection screen is the same as the Windows version, except that it does not contain a menu bar with File and Help menus.

Note: *When accessing the AP Java Client for the first time, you will be prompted to provide a serial number. This serial number can be found on the CD that came with your KVM.*

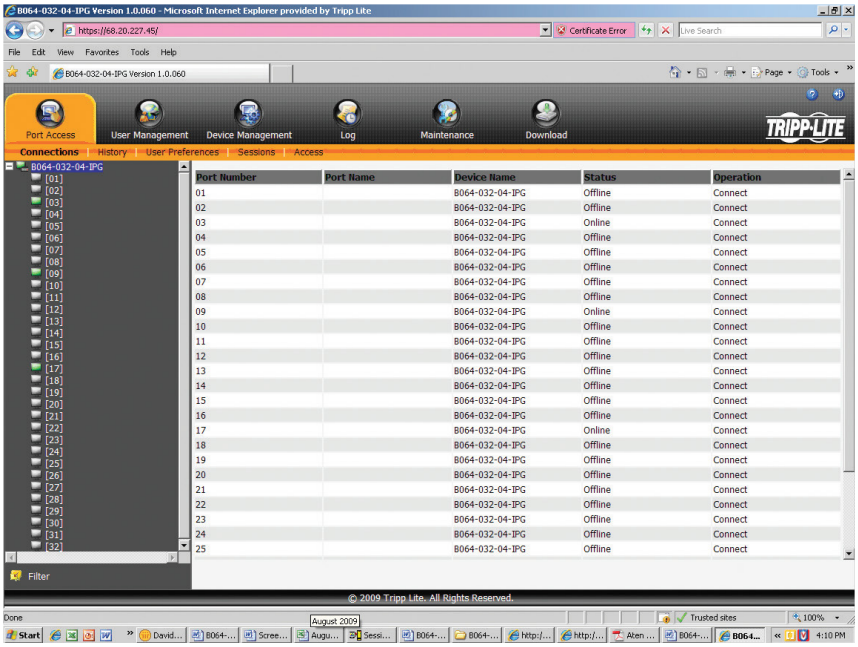


1. If your KVM is displayed in the Server List, connect to it by highlighting it and clicking on the *Connect* button.

   Note: *For a switch to show up in the Server List, the Enable Device List checkbox in the Operating Mode page (see Operating Mode section under Device Management in OSD Operation for details for details) must be checked and the Program server port must match what is set in the Network page (See Network section under Device Management in OSD Operation for details.)*
2. If your KVM does not display in the *Server List*, enter in its *IP address* in the IP server field and click the *Connect* button.
3. Upon clicking the connect button, you will be prompted to enter your username and password. Enter in your username and password and press *OK*.
4. When connected, the *Remote View* button will be activated. Click on it to access the KVM remotely. Click on the *Disconnect* button to log out of the KVM switch.

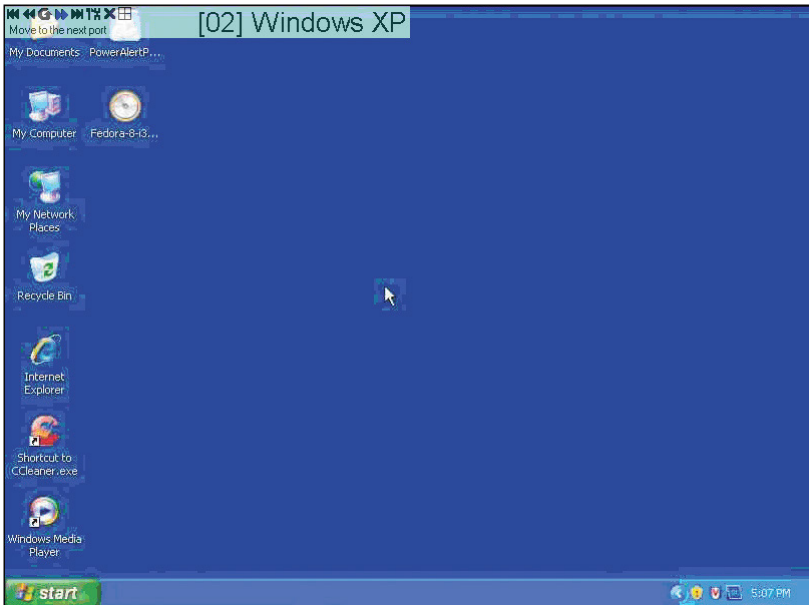
6.4 Remote Session Operation

After you have successfully logged in (see *Logging Into the B022-Series KVM Switch* section), the B022-Series KVM Switch OSD Main Page appears with the Port Access tab selected:



Note: *The AP Client and Local Console versions feature a Control Panel in the top center of the screen that appears when scrolled over with the mouse. The web browser version's Control Panel is only available when a port has been accessed.*

All the ports that a user is permitted to access are listed in the Port Selection panel at the left of the page. Ports to which users do not have access will not be displayed in their OSD. Double-click a port icon to access the device attached to it. Once you switch to a port, its screen displays on your monitor. Depending on whether you have Full Access or View Only access to the port, you may or may not be able to operate the remote computer using your keyboard and mouse.



6.4.1 The OSD Toolbar

The OSD provides a toolbar to help you control the B022-Series KVM Switch from within the captured port. There are three hotkey combinations that can be used to pull up the OSD Toolbar and/or OSD when in a remote session:

- When in a remote session, hit the hotkey **[Scroll Lock]** twice to open the OSD Toolbar.
- When in a remote session, hit the hotkey **[Scroll Lock]** three times to open the OSD.
- When the OSD Toolbar is opened in a remote session, hit the hotkey **[Scroll Lock]** once to open the OSD.

The OSD Toolbar is shown below:



Depending on the settings that were selected for ID Display, the Port Number and/or the Port Name display at the right of the toolbar.

Note: *When the toolbar displays, mouse input is confined to the toolbar area and keyboard input (other than the Scroll Lock/Control hotkey) has no effect.*

The meanings of the toolbar icons are given in the table below:

Item	Description
	Click to skip to the first accessible port on the entire installation without having to invoke the OSD.
	Click to skip to the first accessible port previous to the current one without having to invoke the OSD.
	Click to begin Auto Scan Mode. The B022-Series KVM Switch automatically switches among the ports that were selected for Auto Scanning in the Port Select and Filter functions. This allows you to monitor their activity without having to switch among them manually.
	Click to skip from the current port to the next accessible one without having to invoke the OSD.
	Click to skip from the current port to the last accessible port on the installation without having to invoke the OSD.
	Click to bring up the OSD.
	Click to close the OSD toolbar.
	Click to invoke Panel Array Mode. (See *Panel Array Mode* section under *The OSD Toolbar* for details.)
	As the length of Cat5 cable between the KVM and connected computer can affect video quality, this setting is designed to compensate for shorter or longer lengths. Click to toggle through the Cat5 cable length options; *Short (Less than 32 ft. / 10 m), Medium (Between 32 ft. / 10 m and 82 ft. / 25 m) and Long (Over 82 ft. / 25 m)*.

Toolbar Hotkeys

When the *Toolbar* is displayed, hotkeys can be used to switch between ports. The table below describes what actions can be performed.

Hotkey	Action
←	Skips from the current port to the first accessible port previous to it. To gain control of the selected port, hit the [Esc] key or click on the X icon in the *Toolbar.*
→	Skips from the current port to the first accessible port after it. To gain control of the selected port, hit the [Esc] key or click on the X icon in the *Toolbar*.
↑	Skips from the current port to the first accessible port on the installation. To gain control of the selected port, hit the [Esc] key or click on the X icon in the *Toolbar*.
↓	Skips from the current port to the last accessible port on the installation. To gain control of the selected port, hit the [Esc] key or click on the X icon in the *Toolbar*.
A	Starts an *Auto Scan*. To exit *Auto Scan* and take control of the currently selected port, hit the [Esc] or [Spacebar] key, or click on the X icon in the *Toolbar*.
P	Pauses an *Auto Scan*. To resume scanning, hit any key other than the [Esc] or [Spacebar].

6.4.2 Mouse Synchronization

If the local mouse pointer goes out of sync with the remote system's mouse pointer, there are a number of methods to bring them back into sync.

Before trying any mouse synchronization procedures, it is always a good idea to ensure that you go to your *Mouse Properties Settings* and set them according to the instructions that follow. The *Mouse Properties Settings* should be set on the computers attached to the B022-Series KVM Switch, not the computer you are using to access it.

Note: *In order for the local and remote mice to synchronize, you must use the generic mouse driver supplied with the MS operating system. If you have a third party driver installed - such as one supplied by the mouse manufacturer - you must remove it.*

Windows 2000:

1. Open the *Mouse Properties* dialog box
2. Click the *Motion* tab
3. Set the mouse speed to the middle position (6 units in from the left)
4. Set the mouse acceleration to *None*

Windows XP and later:

1. Open the *Mouse Properties* dialog box
2. Click the *Pointer Options* tab
3. Set the mouse speed to the middle position (6 units in from the left)
4. Disable *Enhance Pointer* Precision

Sun / Linux:

Open a terminal session and issue the following command:

Sun: xset m 1

Linux: xset m 0

Mouse Synchronization Procedures

If you are having syncing problems after adjusting the mouse properties, try the following methods to help synchronize the local and remote mouse pointers.

Note: *Mouse synchronization may require several seconds to take effect. Wait for 15 to 30 seconds to ensure that the mouse has had enough time to sync.*

- When in a remote session, move the mouse pointer to the upper-center of the screen to open the control panel, and then move it back into the remote screen. The mouse pointers should align.
- Click the *Video Auto Sync* icon in the control panel. In most cases, the local and remote mouse pointers will sync following the video auto sync.
- Invoke the *Adjust Mouse* hotkey command. This hotkey command defaults at F8, F7, F6.
- Adjust the video settings to decrease the amount of information being transferred over the network. The less data that is being sent, the faster the response time. In particular, the *Quality* and *Detect Tolerance* settings in the *Video Settings* screen can help improve keyboard and mouse response time.
- Go to the *Network* page in the OSD and reduce the *Network Transfer Rate* setting.
- Go to the display settings section of the remote computer and lower the video resolution, refresh rate and color settings.
- If the remote computer has a graphic desktop background, change it to a solid color background.

7. Warranty & Product Registration

3-YEAR LIMITED WARRANTY

TRIPP LITE warrants its products to be free from defects in materials and workmanship for a period of three (3) years 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.

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Visit www.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.

FCC Notice, Class A

This 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.

Note: 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 user must use shielded cables and connectors with this equipment. Any changes or modifications to this equipment not expressly approved by Tripp Lite could void the user's authority to operate this equipment.

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.





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