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Owner's Manual

Cat5 Rackmount KVM Switch

Model: B064-016

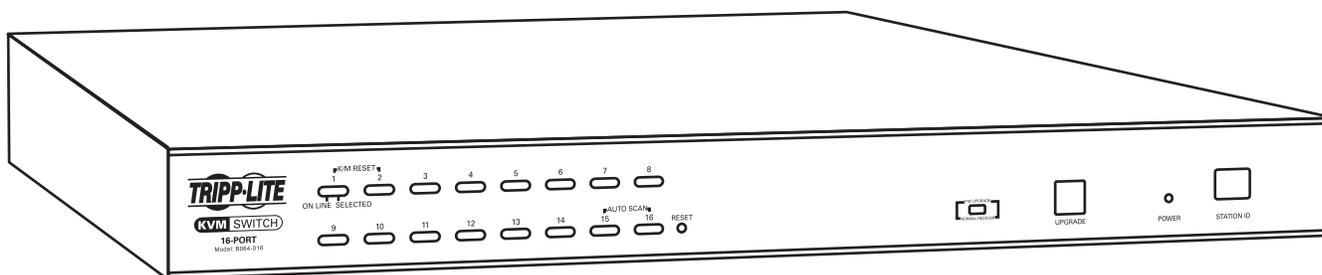


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Overview

Package Contents

- B064-016 KVM Switch
- Rackmount Hardware
- RJ11 to DB9 Firmware Upgrade Cable
- C13 to 5-15P Power Cord
- Grounding Wire
- Foot Pads
- Owner's Manual CD

System Features

- Directly connect up to 16 computers; or, expand the number of connected computers to up to 512 by daisy-chaining up to 31 additional levels of B064-016 KVM Switches.
- Control multiple computers from a single keyboard, monitor and mouse. Both USB and PS/2 keyboards and mice are supported.
- RJ45 connectors and Cat5e/6 cable allow for a more efficient installation.
- Quickly access connected computers via On Screen Display (OSD), Push-button or Hotkey commands.
- Firmware upgradeable using the included RJ11 to DB9 firmware upgrade cable.
- Multi-language support; OSD can be displayed in English, German, Japanese, Traditional Chinese or Simplified Chinese.
- Compatible with Windows®, Mac®, Linux, UNIX, Novell, Sun and DOS operating systems.
- Supports video resolutions up to 1600 x 1200 (60Hz) at 131 ft. (40 m.), or up to 1280 x 1024 (75Hz) at 164 ft. (50 m.).
- Two-level password security; add up to 1 Administrator and 10 User accounts.

System Requirements

Console

- A monitor with a VGA (HD15) input that is capable of supporting the highest video resolution that you will be using on the connected computers.
- A USB or PS/2 mouse.
- A USB or PS/2 keyboard.

Connected Computers

- A VGA (HD15) input.
- A USB A Female port, or two PS/2 keyboard/mouse ports.

Server Interface Units (SIUs)

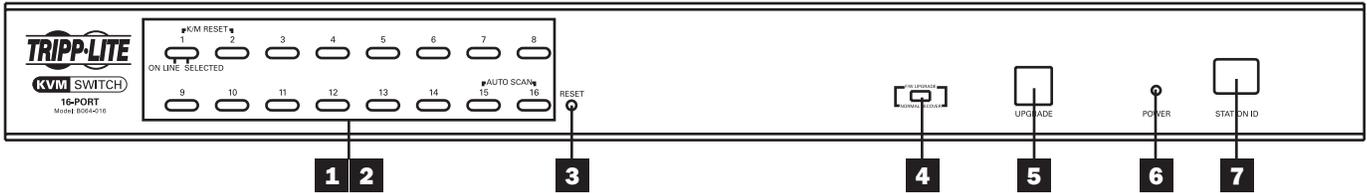
A SIU is required for each computer that is being connected to the KVM switch, and Cat5e/6 cable is required to connect the KVM to the SIU. The following table lists the SIUs that are compatible with the B064-016 KVM Switch:

Function	SIU
Connect to a computer with PS/2 keyboard/mouse ports. Up to 164 ft. (50 m.)	B055-001-PS2
Connect to a computer with USB ports. Up to 164 ft. (50 m.)	B055-001-USB

Overview

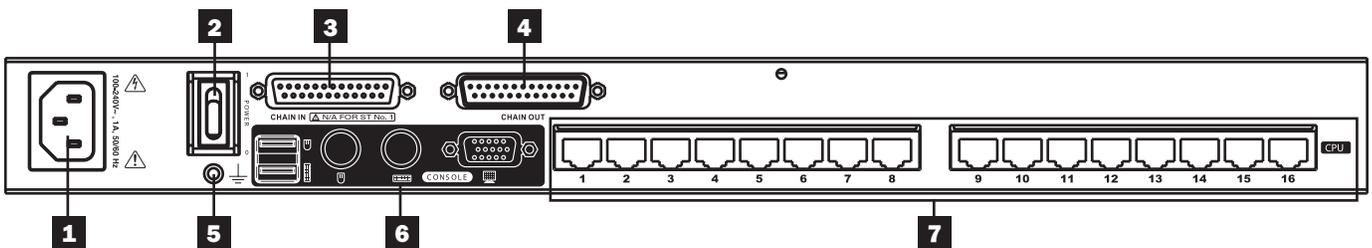
Component Features

Front Panel



- 1 Push-Buttons:** Press a push-button to bring the KVM focus to that port. Simultaneously pressing push-buttons 1 and 2 for three seconds will perform a keyboard/mouse reset. Simultaneously pressing push-buttons 15 and 16 for three seconds will invoke Auto Scan Mode. (See F7:SCAN on page 18 for details.)
- 2 Port LEDs:** Each push-button contains two LEDs; an *Online LED* on the left, and a *Selected LED* on the right. When a computer is connected to a port and powered-ON, that port's *Online LED* illuminates green. When a port has the focus of the KVM, its *Selected LED* illuminates orange. When accessed in Auto Scan Mode, the port's *Selected LED* flashes.
- 3 Reset Button:** Pressing the reset button performs a system reset, which is the same as turning the KVM switch OFF and then back ON. *Note: This button is semi-recessed and will need to be pressed with a small object, such as a paperclip.*
- 4 Firmware Upgrade Switch:** In normal KVM operation, this switch should always be set to the *Normal* position. In the event of an unsuccessful firmware upgrade, this switch will need to be set to the *Recover* position in order to perform a firmware upgrade recovery. (See Firmware Upgrade Recovery on page 20 for details.)
- 5 Firmware Upgrade Port:** The included firmware upgrade cable connects to the KVM switch here during a firmware upgrade.
- 6 Power LED:** This LED illuminates blue when the KVM switch is connected to a power source and turned on.
- 7 Station ID LED:** This numerical LED displays the KVM switches position in a daisy-chain installation, from 01 to 32.

Rear Panel



- 1 Power Input (C14):** The included C13 to 5-15P power cord connects to the KVM switch here.
- 2 Power Switch:** Turn the KVM switch ON/OFF using this switch.
- 3 Daisy-Chain In Port:** When daisy-chaining KVM switches together, this DB25 Female port connects to the *Daisy-Chain Out* port of the previous KVM switch in the installation using a Tripp Lite P772-Series Daisy-Chain Cable. (See Daisy-Chain Installation on page 7 for details.)
- 4 Daisy-Chain Out Port:** When daisy-chaining KVM switches together, this DB25 Male port connects to the *Daisy-Chain In* port of the next KVM in the installation using a Tripp Lite P772-Series Daisy-Chain Cable. (See Daisy-Chain Installation on page 7 for details.)
- 5 Grounding Terminal:** The included grounding wire connects the KVM switch here.
- 6 Console Ports:** The keyboard, monitor and mouse connect to the KVM switch here. The console ports include a VGA (HD15) monitor port, two PS/2 keyboard/mouse ports and two USB keyboard/mouse ports.
- 7 Computer Ports:** The Cat5e/6 cables that connect to each computer's *Server Interface Unit (SIU)* plug into to the KVM here.

Overview

Hardware Setup

General Safety Instructions

- Read all of these instructions. Save them for future reference.
- Follow all warnings and instructions marked on the device.
- 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. Do not use this equipment in the presence of a flammable anesthetic mixture with air, oxygen or nitrous oxide.
- This device is designed for IT power distribution systems with up to 230V phase-to-phase voltage.
- 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 permit adequate ventilation. To ensure reliable operation and protect against overheating, these openings must never be blocked or covered.
- The device should not 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. Use a damp cloth for cleaning. Do not use liquid or aerosol cleaners.
- 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.
- To prevent damage to your installation, ensure 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 outlet. Do not attempt to defeat the purpose of the grounding-type plug. Always follow your local/national wiring codes.
- Position system cables and power cables carefully to ensure that nothing rests on any cable. 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 ampere rating of all products used on the 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, it is recommended that you plug your devices into a Tripp Lite Surge Suppressor, Line Conditioner or Uninterruptible Power Supply (UPS).
- When connecting or disconnecting power to hot-pluggable power supplies, observe the following precautions:
 - 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 any of 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.
- Adjust only those controls that are covered in the operating instructions. Improper adjustment of other controls may result in damage that will require extensive repair work by a qualified technician.
- Do not connect the RJ11 connector marked "UPGRADE" to a public telecommunications network.

Installation

Rackmount Warnings

- 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 for 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 the rack.

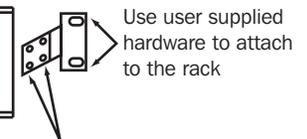
Stacking

The KVM switch can be placed on any level surface that can safely support its weight plus the weight of attached cables. When placing the KVM switch on a desktop, remove the backing material from the rubber feet that came with this package and affix them to the switch's bottom panel at the corners. *Note: To ensure adequate ventilation, allow at least 5 cm on each side, and 13 cm at the back for power cord and cable clearance.*

Rackmounting

The KVM switch can be mounted in a 19-in (1U) rack space. The rack mount brackets can be installed on either the front or the back of the unit so that it can be mounted to the front or back of the rack.

1. Depending on whether you front-rack mount or rear-rack mount the unit, remove the two screws located on both sides of the front or back of the unit.
2. Use the screws supplied with the rack mount kit to attach the rack mount brackets to the front or rear of the unit.
3. Position the device in the front or rear of the rack and align the holes in the mount brackets with the holes in the rack.
4. Secure the rack mount brackets to the rack using user-supplied screws.

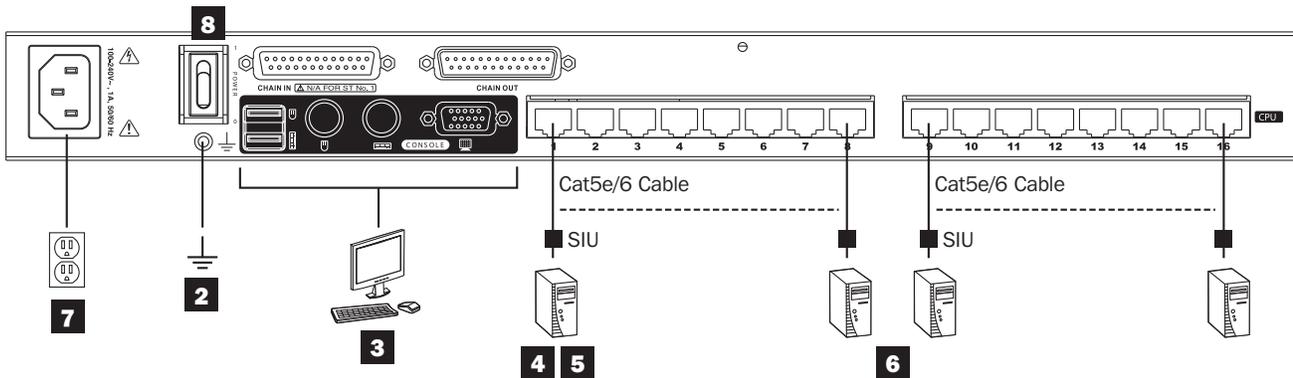


Use the M3x8 Phillips head hex screws provided with the rack mount kit

Installation

Single-Stage Installation

In a single-stage installation, there are no additional KVM switches daisy-chained from the KVM switch. To set up a single-stage installation, refer to the following instructions and the corresponding installation diagram:

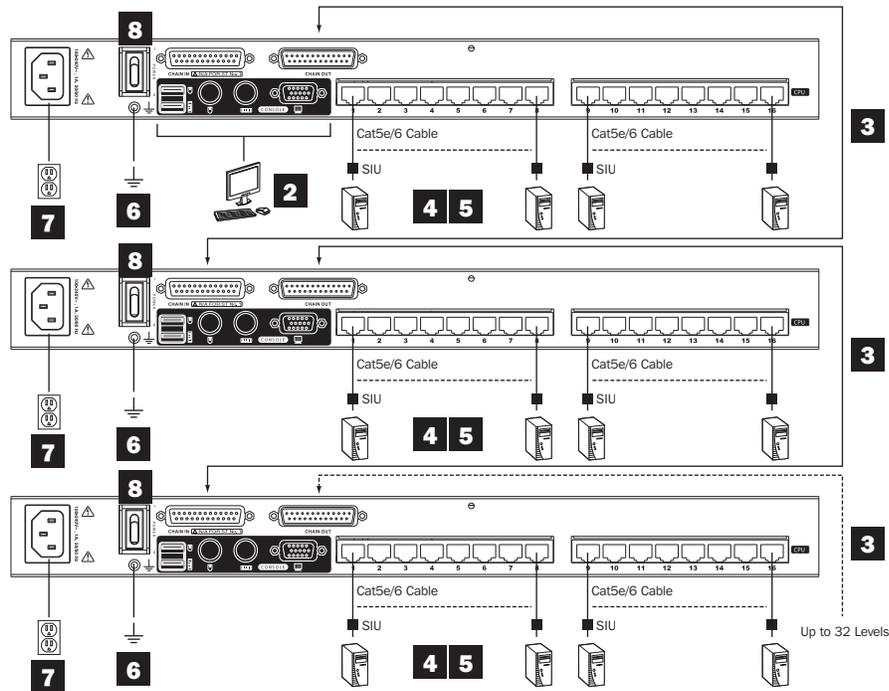


- 1** Make sure that power to all the devices you will be connecting has been turned OFF. You must unplug the power cords of any computers that have the *Keyboard Power On* function.
- 2** Ground the KVM switch by connecting one end of the included grounding wire to the grounding terminal on the back of the unit, and then connect the other end to a suitable grounding object. Proper grounding helps to protect your unit from damage due to surges or static electricity.
- 3** Plug your keyboard, monitor and mouse into the console ports on the back of the unit. *Note: You can connect any combination of keyboard and mouse; both USB keyboard and mouse, both PS/2 keyboard and mouse, or one of each type.*
- 4** Connect an available RJ45 computer port on the KVM to a *Server Interface Unit (SIU)* appropriate for the computer you are connecting using Cat5e/6 cable. (See *Server Interface Units (SIUs)* on page 2 for details on which SIU to use.)
- 5** Connect the SIUs console connectors to the computer.
- 6** Repeat steps 4 and 5 for each additional computer you are connecting.
- 7** Connect the included power cord to the KVM switch, and then plug it into a Tripp Lite Surge Suppressor, Power Distribution Unit (PDU) or Uninterruptible Power Supply (UPS).
- 8** Power ON the KVM switch, and then power ON all connected computers.

Installation

Daisy-Chain Installation

Up to 32 levels of B064-016 KVM Switches can be daisy-chained together to increase the number of connected computers to up to 512. In a daisy-chain installation, the first KVM switch in the installation is considered *Station 1*, the next KVM is *Station 2*, etc. Each KVM automatically identifies its position in the daisy-chain installation and displays the station number in the *Station ID* LED on the front of the unit. To set up a daisy-chain installation, refer to the following instructions and the corresponding installation diagram:



- 1** Make sure that power to all the devices you will be connecting has been turned OFF. You must unplug the power cords of any computers that have the *Keyboard Power On* function.
- 2** Plug your keyboard, monitor and mouse into the console ports on the back of the first KVM in the installation. *Note: You can connect any combination of keyboard and mouse; both USB keyboard and mouse, both PS/2 keyboard and mouse, or one of each type.*
- 3** Connect the *Daisy-Chain Out* port of the first KVM switch to the *Daisy-Chain In* port of the next KVM switch in the installation using a Tripp Lite P772-Series Daisy-Chain Cable. *Note: The distance between any two daisy-chained KVMs can not exceed 49 ft. (15 m.). The distance between the first and last KVM in a daisy-chain can not exceed 328 ft. (100 m.). Repeat this step for each KVM you are adding to the installation.*
- 4** Connect an available RJ45 computer port on a KVM switch to a *Server Interface Unit (SIU)* appropriate for the computer you are connecting using Cat5e/6 cable. (See *Server Interface Units (SIUs)* on page 2 for details on which SIU to use.)
- 5** Connect the SIUs console connectors to the computer. Repeat steps 4 and 5 for each additional computer you are connecting.
- 6** Starting with the first KVM in the installation, ground each switch by connecting one end of the included grounding wire to the grounding terminal on the back of the unit, and then connect the other end to a suitable grounding object. Proper grounding helps to protect your unit from damage due to surges or static electricity. Repeat this step for each KVM in the installation.
- 7** Starting with the first KVM in the installation, connect the included power cord to the switch, and then plug it into a Tripp Lite Surge Suppressor, Power Distribution Unit (PDU) or Uninterruptible Power Supply (UPS). Repeat this step for each KVM in the installation.
- 8** Power-ON the first KVM switch in the installation, and wait for its station number to be displayed on the front of the unit. Once displayed, power-ON each subsequent KVM in the installation, waiting for the station number to be displayed before powering on the next unit. Once all KVMs are powered-ON, power-ON all connected computers.

Operation

This section covers basic operation of the KVM switch; logging in for the first time, turning the installation OFF/ON, hot plugging and port selection.

Powering Off and Restarting

If it becomes necessary to power-OFF the KVM switch, follow these steps to power it back on properly.

1. Power-OFF the KVM and all computers that are connected to it. *Note: You must disconnect the power cords of any computer that have the Keyboard Power On function.*
2. Wait 10 seconds after powering everything down and then power the KVM switch back ON. If you have shut down more than one KVM switch in a daisy-chain, power-ON the KVM closest to Station 1 first. Wait until the KVMs Station ID appears on the front panel of the unit, and then power-ON the next closest KVM switch to Station 1, repeating this step until all KVMs are powered ON.
3. After all KVM switches are powered on and their Station IDs displayed, power-ON the connected computers.

Hot Plugging

The BO64-016 supports Hot Plugging, meaning components can be unplugged and re-plugged without shutting down the KVM switch. In order to ensure proper functionality, follow the procedures below:

Hot Plugging KVMs in a Daisy-Chain Installation

KVM switches can be unplugged from one position in a daisy-chain and re-plugged into another position. After doing this, you must reset the station IDs in the OSD so that the proper daisy-chain order is recognized and the OSD menus correspond to the change. (See RESET STATION ID on page 16 for details.)

Hot Plugging Connected Computers

You can unplug a computer's SIU from one of the KVMs computer ports and plug it into another. After doing so, you will need to update the port settings (Port Name, Operating System, etc.) in the OSD. (These settings are explained in the F4: ADM section on page 16. Also, the port settings assigned to the port you just moved the computer from will remain the same as before until you change them. *Note: If a computer's operating system does not support hot plugging, this operation may not work properly.*

Hot Plugging Console Ports

The keyboard, monitor and mouse can all be hot plugged; however, the following conditions must be noted.

- If you unplug a mouse, the same mouse must be plugged back in, or all KVMs in a daisy-chain installation may need to be powered-OFF and restarted. (See Powering Off and Restarting on page 8.)
- If a computer's operating system does not support hot plugging, this operation may not work properly.
- If there is no keyboard/mouse response after hot plugging, perform a keyboard mouse reset by holding down push-buttons 1 and 2 for three seconds. This must be done for each KVM in a daisy-chain installation.

Logging In for the First Time

After setting up your KVM installation, the first screen that you will see is the login screen, prompting you for a *Username* and *Password*. If you are the first person to access the KVM switch, the default username and password are blank. Simply hit the **[Enter]** key twice to open the On-Screen Display (OSD) as an administrator and access the KVM switch. *Note: For security purposes, it is strongly recommended that you change these to a unique username and password. If you are not the first person to access the KVM switch, enter in the username and password as given to you by the KVM administrator.*

Port Selection

Once logged into the KVM switch, you can access the connected computers via push-button, OSD or hotkey commands. The sections that follow describe each of these methods:

Push-Button Port Selection

To access a computer/server, simply press the push-button on the front of the KVM that corresponds to the port that it is connected to. Pressing push-buttons 1 and 2 simultaneously for three seconds will perform a keyboard/mouse reset on all of the computers connected to that KVM switch. Pressing push-buttons 15 and 16 simultaneously for three seconds invokes Auto Scan Mode. (See F7:SCAN on page 18 for details.)

Operation

OSD Port Selection

When in the OSD main screen, you can access a computer/server by highlighting it in the port list and pressing the **[Enter]** key; or, by double-clicking on it with the mouse. You can highlight a port using the **[↓]** and **[↑]** arrow keys on the keyboard; or, by clicking on the triangle icons on the far right of the OSD main screen. The **[Page Up]** and **[Page Down]** keys will display additional ports in the installation, as will clicking on the arrow icons on the far right of the OSD main screen. Daisy-chain stations may appear in the OSD as collapsed folders, in which case you will need to highlight the desired station and press the **[Enter]** key to toggle between expanding and collapsing the station ports. You can also use the **[→]** and **[←]** keys to expand/collapse the station ports; or, click on the desired station with your mouse.

Hotkey Commands

Hotkey commands allow you to switch the focus of the KVM using only the keyboard. The following section describes the hotkey functionality available for the B064-016. At the end of this section is a table of all the available hotkeys.

Hotkey Setting Mode

All hotkey commands start by entering *Hotkey Setting Mode*. When in *Hotkey Setting Mode*, the **[Scroll Lock]** and **[Caps Lock]** keyboard LEDs flash in succession and ordinary keyboard and mouse functions are suspended. Only hotkey related keystrokes can be performed. To exit without performing a hotkey command, simply press the **[Esc]** key. *Note: Hotkey command mode must be turned on in the OSD for hotkeys to work. (See the Hotkey Command Mode setting in the F3:SET menu section on page 15.)*

To initiate Hotkey Setting Mode, perform the following command:

1. Press and hold down the **[Num Lock]** key.
2. While holding down the **[Num Lock]** key, press and release the minus **[-]** key.
3. After releasing the minus **[-]** key, release the **[Num Lock]** key.

Alternate Hotkey Setting Mode Activation Command

By default the command to activate *Hotkey Setting Mode* includes the **[Num Lock]** and minus **[-]** keys. This can be switched to include the **[Ctrl]** and **[F12]** keys by performing the following command:

1. Activate Hotkey Setting Mode using the aforementioned command.
2. Press and release the **[H]** key.

A couple of seconds after releasing the **[H]** key, the activation command will be changed to use **[Ctrl]** instead of **[Num Lock]**, and **[F12]** instead of the minus **[-]** key. Once the activation command is changed, you will be exited from *Hotkey Setting Mode*. To change the activation command back, simply perform the *Alternate Hotkey Setting Mode Activation Command* again. The *Hotkey Setting Mode* activation command can also be changed via the OSD. (See the Hotkey setting in the F3:SET menu section on page 15.)

Alternate OSD Menu Activation Command

You can also switch the command that is used to open the KVM OSD. The default sequence to open the OSD menu is **[Scroll Lock] [Scroll Lock]**. This command can be changed to **[Ctrl] [Ctrl]** or **[Alt] [Alt]** via the OSD (see the OSD Hotkey setting in the F3:SET menu section on page 14); or, by performing the following command:

1. Activate *Hotkey Setting Mode* using the aforementioned command.
2. Press and release the **[T]** key.

After pressing the **[T]** key, the OSD menu activation command toggles to the next available command. Commands will always toggle from **[Scroll Lock] [Scroll Lock]** to **[Ctrl] [Ctrl]** to **[Alt] [Alt]**. Perform this command until you have selected the desired OSD activation command. *Note: When using [Ctrl] [Ctrl] or [Alt] [Alt], you must hit the same [Ctrl] or [Alt] key both times.*

Operation

Selecting the Active Port

Each port on the KVM is assigned a four digit port ID, which can be used when in *Hotkey Setting Mode* to switch the focus of the KVM to a desired port. The first two digits of the port ID represent the Station ID of the KVM that the port is on, and the last two digits represent the port number. For example, the port ID for the fourth port on the second station in a daisy-chain would be 02-04. You can select the active port by performing the following command:

1. Activate *Hotkey Setting Mode* using the aforementioned command.
2. Key in the desired port ID.
3. Press the **[Enter]** key.

After pressing the **[Enter]** key, the focus of the KVM will switch to the selected port and you will exit *Hotkey Setting Mode*.

Note: When in a single stage installation, you do not need to enter the entire four digit port ID. For example, to access port 4, you can simply type in 4 or 04 and press the [Enter] key.

Initiate an Auto Scan

Auto Scan allows you to switch between ports at regular intervals without having to manually switch between them. By default, the *Scan Duration* is set at 5 second intervals. The *Scan Duration* can be changed via the OSD (see the *Scan Duration* setting in the F3:SET menu section on page 14); or, via the hotkey command mentioned later in this section. When scanning, the only computers that are accessed are those that are accessible to the logged on user. To initiate an *Auto Scan*, perform the following command:

1. Activate *Hotkey Setting Mode* using the aforementioned command.
2. Press and release the **[A]** key.
3. Press and release the **[Enter]** key.

When in *Auto Scan* mode, normal keyboard and mouse operation are suspended. You can press the **[P]** key to pause at the currently selected port, and press any key to resume scanning. To exit *Auto Scan* mode, press the **[Esc]** key or **[Spacebar]** key. *Auto Scan* will stop scanning at the port that currently has the KVMs focus.

Initiate an Auto Scan at a Desired Time Interval

To initiate an *Auto Scan* using a desired time interval, perform the following command:

1. Activate *Hotkey Setting Mode* using the aforementioned command.
2. Press and release the **[A]** key.
3. Enter in a *Scan Duration* from 1 to 255 seconds.
4. Press and release the **[Enter]** key.

Note: This hotkey command will not only perform the current Auto Scan at the desired interval, it will also change the Scan Duration in the OSD.

Skip Mode

Similar to *Auto Scan* mode, *Skip Mode* allows you to easily monitor the connected computers. Unlike *Auto Scan Mode*, *Skip Mode* allows you to monitor connected computers at your leisure, without automatically jumping to the next port after a set time interval. *Skip Mode* also allows you to jump back and forth between ports, as opposed to an *Auto Scan*, which automatically skips to the next available port. To initiate *Skip Mode*, perform the following command:

1. Activate *Hotkey Setting Mode* using the aforementioned command.
2. Press and release one of the arrow keys (↓, ↑, →, ←). You will automatically be entered into *Skip Mode* and sent to either the next port, previous port, the first port in the installation, or the last port in the installation, depending on which arrow key you pressed.
3. Once in *Skip Mode*, you can press an arrow key to jump to another port.
 - Pressing the → key will take you to the next port
 - Pressing the ← key will take you to the previous port
 - Pressing the ↓ key will take you to the first port in the installation
 - Pressing the ↑ key will take you to the last port in the installation

When in *Skip Mode*, normal keyboard and mouse operation are suspended. To exit *Skip Mode*, press the **[Esc]** key or **[Spacebar]** key to stop at the port that currently has the KVMs focus.

Operation

Computer Keyboard/Mouse Reset

In the event that the keyboard and mouse are not operating correctly, a reset may be needed. To perform a USB keyboard/mouse reset on the currently selected computer, do the following:

1. Activate *Hotkey Setting Mode* using the aforementioned command.
2. Press and release the **[F5]** key.

After pressing the **[F5]** key, you will automatically exit *Hotkey Setting Mode* and a keyboard/mouse reset will be performed. If you are still unable to regain access to your keyboard and mouse, you may need to restart the affected computer or perform a system reset.

Turning Beeper ON/OFF

The beeper sound that occurs when performing a hotkey command or when switching ports can be toggled ON/OFF via the OSD (see the Activate Beeper setting in the F3:SET menu section on page 15); or, by performing the command below.

1. Activate *Hotkey Setting Mode* using the aforementioned command.
2. Press and release the **[B]** key.

After pressing the **[B]** key, text will be displayed stating the beeper has been turned ON or OFF, and *Hotkey Setting Mode* will be exited.

Setting the Port Operating System (Administrator Only)

The port's operating system setting can be changed to match that of the connected computer via the OSD (see the Set Operating System setting in the F4:ADM menu section on page 16); or, by performing the command below.

1. Activate *Hotkey Setting Mode* using the aforementioned command.
2. Press and release the **[F1]**, **[F2]** or **[F3]** key. **[F1]** sets the operating system to Windows, **[F2]** to Mac and **[F3]** to Sun.

After pressing the desired function key, the port operating system is changed and *Hotkey Setting Mode* exited.

Restore the OSD Default Values (Administrator Only)

Restoring the OSD default values will erase changes and restore the default values for all OSD settings except usernames, passwords and port names. The OSD default values can be restored via the OSD (see the Restore Default Values setting in the F4:ADM menu section on page 16); or, by performing the command below.

1. Activate *Hotkey Setting Mode* using the aforementioned command.
2. Press and release the **[R]** key.
3. Press the **[Enter]** key.

After pressing the **[Enter]** key, text will be displayed stating the default settings have been restored, and *Hotkey Setting Mode* will be exited.

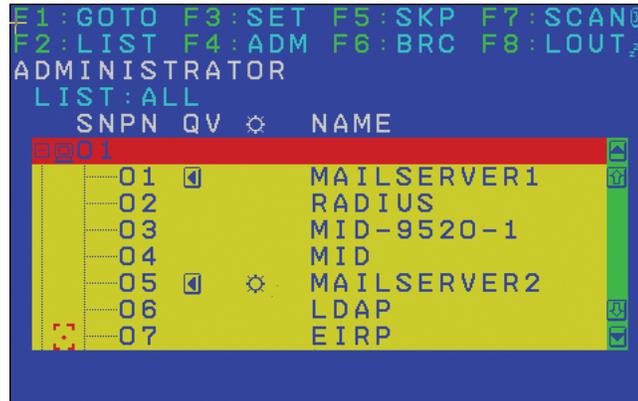
Installation

Hotkey Command Summary Table

Action	Hotkey Command
Activate Hotkey Setting Mode	Press and hold the [Num Lock] key, press and release the minus [-] key, release the [Num Lock] key.
Change Hotkey Setting Mode activation command to [Ctrl], [F12]	Activate Hotkey Setting Mode, [H]
Toggle OSD Menu Activation command between [Scroll Lock] [Scroll Lock] , [Ctrl] [Ctrl] and [Alt] [Alt]	Activate Hotkey Setting Mode, [T] <i>Note: When using [Ctrl] [Ctrl] or [Alt] [Alt], you must hit the same [Ctrl] or [Alt] key both times</i>
Selecting the active port	Activate Hotkey Setting Mode, [Port ID] , [Enter]
Initiate an Auto Scan	Activate Hotkey Setting Mode, [A] , [Enter] . Press the [P] key to pause, and the [Esc] key or [Spacebar] key to exit. When paused, pressing any key will resume scanning.
Initiate an Auto Scan at a desired time interval	Activate Hotkey Setting Mode, [A] , n , [Enter] <i>Note: n is a Scan Interval from 1 to 255 seconds. Press the [P] key to pause, and the [Esc] key or [Spacebar] key to exit. When paused, pressing any key will resume scanning</i>
Initiate Skip Mode and go to the next port	Activate Hotkey Setting Mode, [→] <i>Note: Once in Skip Mode, press an arrow key [↓, ↑, →, ←] to skip through ports. Press the [Esc] key or [Spacebar] key to exit</i>
Initiate Skip Mode and go to the previous port	Activate Hotkey Setting Mode, [←] <i>Note: Once in Skip Mode, press an arrow key [↓, ↑, →, ←] to skip through ports. Press the [Esc] key or [Spacebar] key to exit</i>
Initiate Skip Mode and go to the last port in the installation	Activate Hotkey Setting Mode, [↑] <i>Note: Once in Skip Mode, press an arrow key [↓, ↑, →, ←] to skip through ports. Press the [Esc] key or [Spacebar] key to exit</i>
Initiate Skip Mode and go to the first port in the installation	Activate Hotkey Setting Mode, [↓] <i>Note: Once in Skip Mode, press an arrow key [↓, ↑, →, ←] to skip through ports. Press the [Esc] key or [Spacebar] key to exit</i>
Computer Keyboard/Mouse Reset	Activate Hotkey Setting Mode, [F5]
Turning Beeper On/Off	Activate Hotkey Setting Mode, [B]
Setting port operating system (Administrator only)	Activate Hotkey Setting Mode, [F1, F2 or F3] [F1] sets the OS to Windows, [F2] to Mac and [F3] to Sun
Restore the OSD default values (Administrator only)	Activate Hotkey Setting Mode, [R] , [Enter]

OSD Operation

The On-Screen Display (OSD) is a menu-based interface that allows you to access connected computers and change KVM settings. To open the OSD, hit the **[Scroll Lock]** key twice. If asked for a username and password, enter in the username and password as given to you by the KVM administrator. If this is the first time the KVM is being accessed, the default username and password are blank. Simply press the **[Enter]** key twice to open up the OSD as the administrator. For security purposes, it is strongly recommended that you change these to a unique username and password. *Note: The OSD activation command can be changed from [Scroll Lock] [Scroll Lock] to [Ctrl] [Ctrl] or [Alt] [Alt]. (See the OSD Hotkey setting in the F3:SET menu section on page 14.)* When accessed, the OSD opens with the OSD Main page displayed.



OSD Main Screen Components Table

The following table describes the various components of the OSD main screen:

Component	Description
SN-PN	This column lists the Station Number and Port Number for all ports in the installation. The Station Number is on the far left, and is displayed as an expandable folder. When expanded, the Port Number of each port in the station is displayed.
QV	This column shows which ports have been selected as Quick View ports. (See the Set Quick View Ports setting in the F3:SET menu section on page 15.) When selected as a Quick View port, an icon will display in this column next to the corresponding port.
⚙️	This column displays an icon next to all ports that have computers that are both connected to them and are powered-ON.
Name	This column displays any port names that have been created by the KVM administrator. (See the Edit Port Names setting in the F4:ADM menu section on page 16.)

OSD Main Screen Functionality

In addition to port selection (see OSD Port Selection on page 9 for details), the OSD main screen allows you to access OSD functions and exit the OSD. All functions can be performed using either the keyboard or the mouse. For example, you can close the OSD by pressing the **[Esc]** key or by clicking on the X icon in the upper right corner of the main screen. When closed, the KVM focus goes back to the port you were accessing prior to opening the OSD.

OSD Functions

OSD functions are used to configure and control the KVM. Some functions, such as *F1:GOTO* and *F8:LOUT*, provide immediate functionality when selected. Others, such as *F3:SET* and *F4:ADM*, open up a menu of settings that you can edit. To access a function, simply press the corresponding function key on the keyboard, or click on it with the mouse. The following section describes each function available in the OSD.

F1:GOTO

This function allows you to search and access ports in the installation by name or port number. When selected, a text bar appears at the bottom of the main screen asking if you want to search by name or port. Press the **[1]** key to search by name, or the **[2]** key to search by port. Once you have selected your search method, simply type in the name or port ID to search for. All ports that match your entry will be displayed, minimizing the number of ports you have to search through. Once the list is displayed, select the desired port to access it. You can also press the **[Esc]** key or click on the X in the upper-right corner to go back to the main screen.

OSD Operation

F2:LIST

This function allows you to choose which ports are displayed in the OSD main screen. When selected, the F2:LIST function takes you to a page that gives you the options listed below. To choose an option, simply highlight it and press the **[Enter]** key, or click on it with the mouse.

- **ALL:** Lists all ports on the installation that are accessible to the logged in user. This option is chosen by default.
- **QUICK VIEW:** Lists ports which are both accessible to the logged in user and set as Quick View ports. (See the Set Quick View Ports setting in the F3:SET menu section on page 15.)
- **POWERED ON:** Lists ports which are both accessible to the logged in user and are powered-ON.
- **QUICK VIEW + POWERED ON:** Lists ports which are accessible to the logged in user, powered-ON and set as Quick View ports.

F3:SET

This function is accessible to the administrator and all users. When selected, a menu is opened that contains settings that allow the logged in user to set up an individual working environment. A separate profile is then saved by the OSD and activated according to the username and password provided when logging in. To change a setting in the F3:SET menu, highlight it and press the **[Enter]** key or double-click on it with the mouse. *Note: The following F3:SET menu settings are not user specific, and will affect all users when changed: OSD LANGUAGE, SET CONSOLE KEYBOARD, SET LOGOUT TIMEOUT, ACTIVATE BEEPER and SET QUICK VIEW PORTS.*

The following table details the settings in this menu.

Setting	Description
OSD Hotkey	Selects which command is used to open the OSD. Allows you to choose from three options; [Scroll Lock] [Scroll Lock], [Ctrl] [Ctrl], or [Alt] [Alt] . The default is [Scroll Lock] [Scroll Lock] .
Port ID Display Position	Allows you to determine where the Port ID is displayed. When selected, the screen of the last selected computer will appear with the Port ID displayed. Use the arrow keys on the keyboard or the mouse to position the Port ID. When in the desired location, press the [Enter] key or click the mouse. <i>Note: The [Home], [End], [PgUp], [PgDn] and arrow keys on the number pad can also be used when Num Lock is turned off.</i>
Port ID Display Duration	Selects if the Port ID is displayed or not. Allows you to choose between 3 SECONDS and ALWAYS OFF. The default is to display the Port ID for 3 seconds.
Port ID Display Mode	Selects how the Port ID is displayed. Allows you to choose between PORT NUMBER + PORT NAME, PORT NUMBER and PORT NAME. The default is to display both the port number and name.
Scan Duration	Allows you to change the amount of time spent on each port during an Auto Scan. When selected, a highlight bar will appear at the bottom of the OSD, allowing you to enter a Scan Duration between 0 and 255 seconds. The default is 5 seconds. A setting of 0 disables the Auto Scan function.
SCAN/SKIP MODE	Selects which ports will be scanned during Auto Scan and Skip modes. Allows you to choose from the following: <ul style="list-style-type: none">• ALL: Scans all ports on the installation that are accessible to the logged in user. This option is chosen by default.• QUICK VIEW: Scans ports which are both accessible to the logged in user and set as Quick View ports. (See the Set Quick View Ports setting in the F3:SET menu section on page 15.)• POWERED ON: Scans ports which are both accessible to the logged in user and are powered on.• QUICK VIEW + POWERED ON: Scans ports which are accessible to the logged in user, powered on and set as Quick View ports.

OSD Operation

Setting	Description
Screen Blanker	Allows you to determine if the Screen Blanker feature is turned on, and the time frame it is set for. When selected, a highlight bar will appear at the bottom of the OSD, allowing you to enter a time frame from 0 to 30 minutes. If there is no console activity for the amount of time set here, the screen will be blanked. When blanked, console activity such as mouse movement will bring the display back. A setting of 0 disables this feature. It is disabled by default.
HOTKEY COMMAND MODE	This setting allows you to enable or disable hotkey functionality. When turned off, you will not be able to access Hotkey Setting Mode to control the KVM. When accessed, a highlight bar will appear at the bottom of the OSD Settings Page. Press [Y] to turn the hotkey functionality on, or [N] to turn it off. It is enabled by default.
HOTKEY	Selects which command is used to activate Hotkey Setting Mode. When selected, a sub-menu will appear, allowing you to choose between [Num Lock], [-] and [Ctrl], [F12] . Highlight the desired hotkey and press the [Enter] key, or double-click on it with your mouse. The default OSD hotkey is [Num Lock], [-] .
OSD LANGUAGE	Selects which language the OSD is displayed in. When selected, a sub-menu will appear, allowing you to choose between English, German, Japanese, Traditional Chinese and Simplified Chinese. Simply highlight the desired language and press the [Enter] key or double-click on it with the mouse. The language is set to English by default.
SET CONSOLE KEYBOARD	Allows you to select the language of the keyboard that is connected to the KVM console port, which helps to ensure that the correct keyboard input is sent through the KVM to the connected computers. The default is AUTO.
SET LOGOUT TIMEOUT	Allows you to set the amount of idle time that must pass before a user is logged out of the KVM, requiring them to enter their username and password to regain access. When accessed, a highlight bar appears at the bottom of the OSD, allowing you to enter a value between 0 and 180 minutes. This setting defaults at 0, which disables the Logout Timeout function.
ACTIVATE BEEPER	Allows you to turn the beeper on or off. When activated, the beeper sounds when changing ports, performing hotkey commands, activating an Auto Scan or when an invalid entry is made in the OSD. This setting is turned on by default.
SET QUICK VIEW PORTS	Allows you to set ports as Quick View ports. When selected, the port list will be displayed, allowing you to select or unselect ports as Quick View ports by highlighting them and pressing the [Spacebar] key, or by double-clicking on them with the mouse. Setting ports as Quick View ports lets you customize which ports are displayed in the OSD main screen (See F2:LIST on page 14 for details) or accessed during Auto Scan and Skip modes. (See the Scan/Skip Mode setting in the F3:SET menu section on page 14 for details) By default, there are no ports selected as Quick View ports.

OSD Operation

F4:ADM

This function is available only to the KVM administrator, and will not be accessible by users. It allows the administrator to set up user accounts and access rights, and configure/control the overall operation of the KVM switch. To change a setting in the F4:ADM menu, highlight it and press the **[Enter]** key or double-click on it with the mouse. The following table details the settings in this menu:

Setting	Description
SET USER ACCOUNT	Allows the administrator to set up user accounts with a <i>username</i> and <i>password</i> , or to edit the existing <i>username</i> and <i>password</i> for both the administrator and users. When selected, a list appears with 10 users and 1 administrator. To edit an account, highlight it and press the [Enter] key, or double-click on it with the mouse. A sub-menu appears that allows you to enter/edit the <i>username</i> and <i>password</i> for the account. You will need to enter the <i>password</i> twice for confirmation. <i>Note: Username and password are limited to 16 characters, and can include any combination of letters and numbers. (A-Z, 0-9)</i>
SET ACCESSIBLE PORTS	Allows the administrator to set up or edit port access rights for each user account. When selected, a list appears with 10 users and 1 administrator. To edit an account, highlight it and press the [Enter] key, or double-click on it with the mouse. A sub-menu appears that displays a list of all ports on the installation, with the current access rights displayed in a column to the right of the port number. There are three types of access rights; <i>Full Access (F)</i> , <i>View Only Access (V)</i> and <i>No Access (N)</i> . To edit access rights, highlight the desired port and press the [Spacebar] key or double-click on it with the mouse to toggle between the three choices. Ports that are set to <i>No Access (N)</i> will not show up in a user's OSD port list. By default, all users are given full access rights to every port.
EDIT PORT NAMES	Allows the administrator to give each port a unique name. When selected, a list of all ports on the installation appears. To edit a port's name, highlight it and press the [Enter] key or double-click on it with the mouse. A highlight bar appears at the bottom of the OSD, allowing you to type in a new name, or edit an existing one. When done entering the port name, press the [Enter] key. Press the [Esc] key at anytime to cancel editing without the change taking affect. <i>Note: Port Names are limited to 14 characters, and can include any combination of letters and numbers. (A-Z, 0-9)</i>
RESTORE DEFAULT VALUES	Erases all changes and restores the default values for all OSD settings except usernames, passwords and port names. The OSD default values can also be restored by performing the Restore OSD Default Values hotkey command described on page 11. When accessed, the setting will display a highlight bar at the bottom of the screen asking you to confirm that you want to restore the default values. Press [Y] to restore default values, or [N] to cancel without restoring the default values.
CLEAR THE NAME LIST	Allows the administrator to clear all port names at the same time. When selected, a highlight bar will appear at the bottom of the OSD, asking if you want to clear the name list. Press [Y] to clear the name list or [N] to cancel without clearing it. You can also press the [Esc] key to cancel.
RESET STATION IDS	In the event a daisy-chained KVM is moved to another position in the installation, this setting performs a re-scan of the installation and updates the OSD to correspond to the new physical layout. Only port names will be transferred to their new positions in the installation, all other settings for the transferred KVM (Set Accessible Ports, Set Quick View Ports, etc.) will have to be reset manually.
SET OPERATING SYSTEM	Sets the operating system of the computers connected to the KVM. When selected, a list of all ports is displayed, with the currently selected operating system shown in the column to the right of the port number. You can set a port to one of three operating systems; <i>Windows (WIN)</i> , <i>Mac (MAC)</i> , and <i>Sun (SUN)</i> . To edit the operating system, highlight the desired port and press the [Spacebar] key or double-click on it with the mouse to toggle between the three choices. By default, all ports are set to <i>Windows (WIN)</i> . <i>Note: Sun or Mac computers may not boot when connected to the KVM if this setting does not display the correct operating system.</i>

OSD Operation

SET CAT 5 LENGTH	Allows the administrator to specify the length of the Cat5e/6 cable being used to connect a computer to one of the KVMs ports. When selected, a list of all ports is displayed, with the current Cat5 length setting shown in the column to the right of the port number. You can set a port to one of three lengths; <i>Short (S)</i> , <i>Medium (M)</i> , and <i>Long (L)</i> . <i>Short (S)</i> represents cables up to 82 ft. (25 m.), <i>Medium (M)</i> represents cables between 82 ft. (25 m.) and 114 ft. (35 m.), and <i>Long (L)</i> represents any cable longer than 114 ft. (35 m.). To edit this setting, highlight the desired port and press the [Spacebar] key or double-click on it with the mouse to toggle between the three choices. By default, all ports are set to <i>Short (S)</i> .
SET KEYBOARD LANGUAGE	Allows the administrator to set the keyboard language for computers connected to the KVM switch. When selected, a list of all ports is displayed, with the current keyboard language shown in the column to the right of the port number. To edit this setting, highlight the desired port and press the [Spacebar] key or double-click on it with the mouse to toggle between the choices. By default, all ports are set to English (US).
FIRMWARE UPGRADE	In order to upgrade the firmware of the KVM and connected SIUs, this setting must first be turned on. When selected, a screen appears that displays the firmware version number of the KVM switch, and a highlight bar at the bottom of the screen asking if you want to download new firmware. Press [Y] to initiate firmware upgrade mode, or [N] to cancel. (See Firmware Upgrade section on page 19 for details on performing a firmware upgrade.)
ADAPTER UPGRADE	This setting is the same as the <i>Firmware Upgrade</i> setting, except it is used when only upgrading the firmware to the connected SIUs. The <i>Firmware Upgrade</i> setting allows you to update firmware for both the KVM and SIUs at the same time.
SET LOGIN MODE	Allows the administrator to disable the KVMs password security feature, no longer requiring a username and password to be entered to login to the KVM. When disabled, you can not log out of the KVM switch, and anyone can access the OSD as an administrator simply by performing the [Scroll Lock] [Scroll Lock] activation command. This setting is enabled by default.

F5:SKP

This function allows you to scan through ports at your leisure, and not at set intervals like in *Auto Scan* mode. Computers that are accessible in Skip mode are set up using the Scan/Skip setting in the *F3:SET* menu. To enter Skip mode via the OSD main screen, press the **[F5]** key or click on the *F5:SKP* text at the top of the screen with the mouse. When in Skip mode, use the following keys to toggle between ports.

- **[↑]** – Press this key to skip directly to the last port in the installation
- **[↓]** – Press this key to skip directly to the first port in the installation
- **[→]** – Press this key to skip to the next port
- **[←]** – Press this key to skip to the previous port
- Press the **[Esc]** or **[Spacebar]** keys to exit Skip mode at the currently selected port

F6:BRC

This function is available only to the KVM administrator, and will not be accessible by users. When Broadcast mode is in effect, commands from the console are sent to all available computers on the installation. Ports affected by Broadcast mode commands are determined by the *F2:LIST* function. This function is useful for operations that need to be performed on multiple computers, such as performing a system-wide shutdown or installing software.

- While Broadcast mode is in effect, a speaker symbol appears before the port ID display, and ordinary mouse functionality will be unavailable.
- To exit Broadcast mode, open the OSD and press the **[F6]** key or click on the *F6:BRC* text at the top of the screen.

OSD Operation

F7:SCAN

This function allows you to automatically scan through ports at set time intervals, so that you can monitor connected computers without having to manually switch between them. To enter *Auto Scan* mode via the OSD main screen, press the **[F7]** key or click on the *F7:SCAN* text at the top of the screen with the mouse.

- Computers that are accessible in *Auto Scan* mode are set up using the Scan/Skip setting in the *F3:SET* menu.
- The amount of time that *Auto Scan* mode spends on each port is set using the *Scan Duration* setting in the *F3:SET* menu.
- While *Auto Scan* mode is in effect, an S icon appears before the port ID display, the port push-button LED of the currently selected port will flash, and normal keyboard and mouse functionality will be unavailable.
- To pause *Auto Scan* at the currently selected port, press the **[P]** key or left click the mouse. To resume scanning, press any key or left click the mouse.
- To exit *Auto Scan* mode, press the **[Esc]** or **[Spacebar]** keys. *Auto Scan* will be exited and the currently selected port will be displayed.

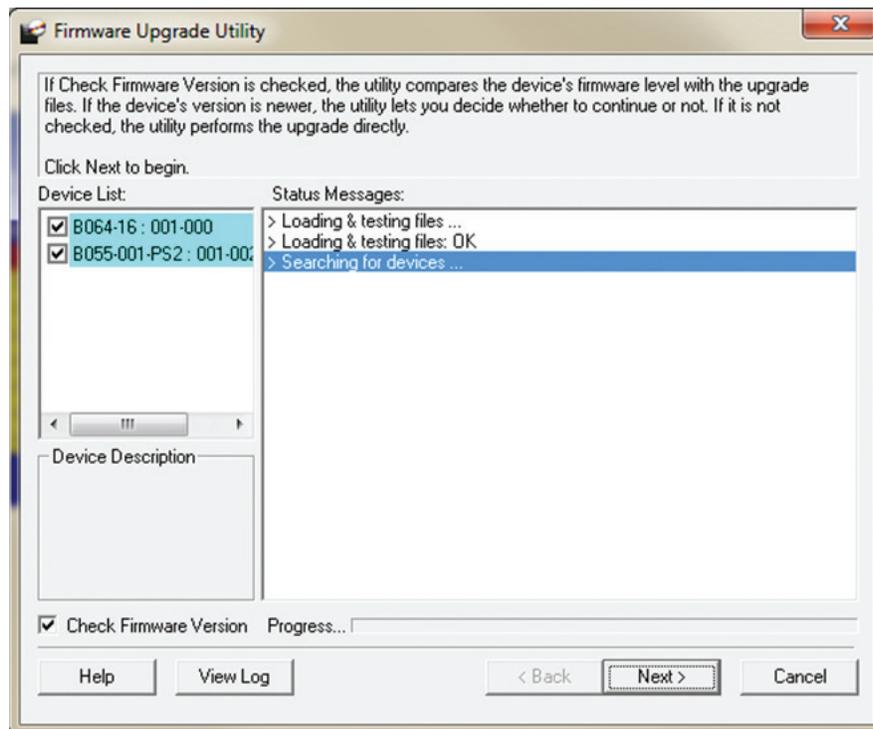
F8:LOUT

This function logs you out of the KVM switch, requiring a username and password to be entered to regain access. To log out, press the **[F8]** key or click on the *F8:LOUT* text at the top of the screen with the mouse. A highlight bar will appear at the bottom of the screen, asking if you wish to log out. Press **[Y]** to logout or **[N]** to cancel and remain logged in. *Note: If the Set Login Mode feature has been disabled, the F8:LOUT function will also be disabled.*

Firmware Upgrade

As firmware upgrades become available, they can be found at www.tripplite.com/support. A single upgrade file contains the Firmware Upgrade Utility, KVM firmware and SIU firmware. To upgrade the firmware of your KVM switch and/or SIUs, follow these steps:

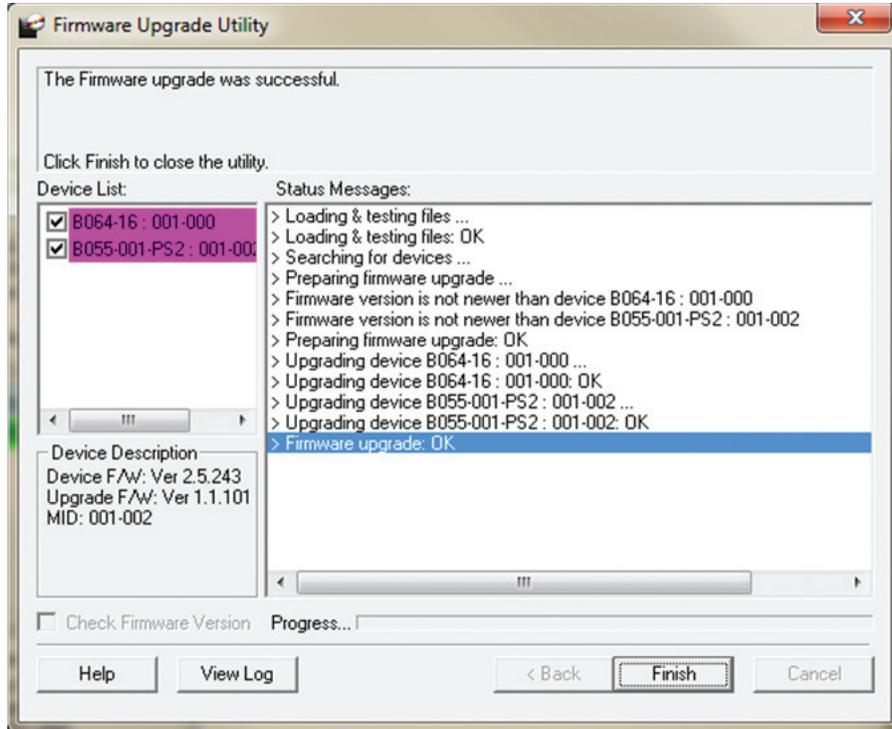
1. From a computer that is not part of your KVM installation, go to www.tripplite.com/support to obtain the firmware upgrade for your KVM switch, and save it to your computer.
2. Using the firmware upgrade cable that came with the unit, connect the cable from the RJ11 firmware upgrade port on the front of the switch to a DB9 Serial port on the computer you saved the firmware to. *Note: In a daisy-chain installation, connect the firmware upgrade cable to the Station 1 KVM. The remaining KVMs will receive the firmware upgrade via the daisy-chain cables.*
3. Invoke *Firmware Upgrade Mode* via the *Firmware Upgrade* setting or the *Adapter Upgrade* setting in the *F4:ADM* menu. (See page 17 for details.) *Note: The Firmware Upgrade setting allows you to upgrade both the KVM firmware and SIU firmware. The Adapter Upgrade setting only allows you to upgrade the SIU firmware.*
4. On the computer the firmware upgrade file is saved to, run the *Firmware Upgrade Utility* file by double-clicking on it or by opening up a command line and typing in the path to it.
5. After reading the license agreement, click on the **I Agree** option and click **Next**. The Firmware Upgrade Utility main screen appears and the utility searches for and displays all upgradeable devices.



6. If you want the *Firmware Upgrade Utility* to check the KVMs firmware version to see if it is older/newer than the firmware upgrade file, check the **Check Firmware Version** box in the lower-left corner of the screen. If you want the *Firmware Upgrade Utility* to upload the firmware upgrade file without checking the KVMs firmware version, leave this box unchecked. Click **Next**.

Firmware Upgrade

- If the *Check Firmware Version* box is checked, and the Firmware Upgrade Utility finds the KVMs firmware is newer than that of the firmware upgrade file, you will be prompted to continue or cancel. Once the firmware upgrade starts, status messages appear in the Status Message panel and progress towards completion is shown in the Progress Bar. When the upgrade is complete, the Status Message panel will inform you that the firmware upgrade was ok. At this point, click **Finish** to complete the firmware upgrade. After a successful firmware upgrade, the switch will reset itself.



Firmware Upgrade Failed

In the event of an upgrade failure, the *Status Messages* panel will display a message that says the upgrade failed, and a dialog box will appear asking if you wish to retry the firmware upgrade. Click **Yes** to retry the firmware upgrade, or **No** to cancel and proceed to a firmware upgrade recovery.

Firmware Upgrade Recovery

If you are unable to successfully upgrade your KVM and SIU firmware, you may not be able to operate the KVM switch. If this is the case, follow the procedure below to recover from a firmware upgrade failure.

KVM Firmware Upgrade Recovery

- Slide the firmware upgrade recovery switch on the front panel of the unit to the *Recover* position.
- Power-OFF and restart the KVM switch according to the Powering Off and Restarting section on page 8.
- Connect the included firmware upgrade cable from the RJ11 firmware upgrade port on the front of the switch to a DB9 Serial port on the computer you saved the firmware to. *Note: In a daisy-chain installation, connect the firmware upgrade cable to the Station 1 KVM. The remaining KVMs will receive the firmware upgrade via the daisy-chain cables.*
- Invoke *Firmware Upgrade Mode* via the Firmware Upgrade setting in the *F4:ADM* menu. (See page 17 for details.)
- Proceed with the firmware upgrade starting with step 4 in the Firmware Upgrade Utility section. (See page 19 for details.)
- When the upgrade is complete and the KVM resets itself, power-OFF the KVM switch.
- Slide the firmware upgrade recovery switch on the front panel of the unit to the *Normal* position. Power-ON the KVM switch according to the Powering Off and Restarting section on page 8.

Firmware Upgrade

SIU Firmware Upgrade Recovery

1. Unplug the SIU from the computer it is connected to.
2. Slide the firmware upgrade recovery switch to the *Recover* position.
3. Plug the SIU back into the computer.
4. Connect the included firmware upgrade cable from the RJ11 firmware upgrade port on the front of the switch to a DB9 Serial port on the computer you saved the firmware to.
5. Invoke *Firmware Upgrade Mode* via the Firmware Upgrade setting or Adapter Upgrade setting in the *F4:ADM* menu (See page 17 for details). *Note: The Firmware Upgrade setting allows you to upgrade both the KVM firmware and SIU firmware. The Adapter Upgrade setting only allows you to upgrade the SIU firmware.*
6. Proceed with the firmware upgrade starting with step 4 in the Firmware Upgrade Utility section. (See page 19 for details.)
7. When the upgrade is complete and the KVM resets itself, unplug the SIU from the computer it is connected to.
8. Slide the firmware upgrade recovery switch to the Normal position, and plug the SIU back into the computer.

Appendix

Mac Keyboard Emulation

The PC compatible (101/104 key) keyboard can emulate the functions of the Mac keyboard using the PC keystrokes in the table below. Note: When more than one key is required on the PC Keyboard to emulate the Mac keyboard, press and release the first key, and then press and release the second key.

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]

Sun Keyboard Emulation

The PC compatible (101/104 key) keyboard can emulate the functions of the Sun keyboard using the PC keystrokes in the table below. Note: When more than one key is required on the PC Keyboard to emulate the Sun keyboard, press and release the first key, and then press and release the second key.

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]
	

Appendix

Factory Default Settings

Setting	Default
F2:LIST	All
OSD Hotkey	[Scroll Lock], [Scroll Lock]
Port ID Display Position	Upper Left Corner
Port ID Display Duration	3 Seconds
Port ID Display Mode	Port Number + Port Name
Scan Duration	5 Seconds
Scan/Skip Mode	All
Screen Blanker	0 (Off)
Hotkey Command Mode	On
Hotkey	[Num Lock], [-]
OSD Language	English
Set Console Keyboard	Auto
Logout Timeout	0 (Off)
Beeper	On
Set Quick View Ports	No Quick View ports set
Set Accessible Ports	All users assigned Full Access (F) to all ports
Set Operating System	All ports set to Windows (WIN)
Set Cat5 Length	All ports set to Short (S)
Set Keyboard Language	All ports set to English (US)
Set Login Mode	On

Specifications

Feature	Specification
# of Computer Ports	16
Expandable (Cascade/Daisychain)	Daisychain
Max Number of Connected Computers via Daisychain	512
Daisychainable Units	B064-016
Daisychain In Port	DB25 Female
Daisychain Out Port	DB25 Male
Daisychain Cable	P772-Series
Form Factor	1U Rackmount
Port Selection	OSD, Hotkeys, Pushbuttons
Console Keyboard/Mouse Ports	(x2) USB, (x2) PS/2
Console Video Port	HD15 Female
Computer Ports	(x16) RJ45 Female
Server Interface Units (SIUs)	B055-001-PS2, B055-001-USB
Power Jack	IEC-320-C14
I/P Rating	100-240V, 50/60Hz, 1A
Power Consumption	120V (6.7W) 230V (7.3W)
On/Off Power Switch	Yes
Reset Button	Yes
Keyboard/Mouse Emulation	PS/2, USB
Max Video Resolution	Up to 131 ft. (40m.) at 1600 x 1200 (60Hz), or up to 164 ft. (50 m.) at 1280 x 1024 (75Hz)
Operating Temperature	0 to 40 C (32 to 104 F)
Storage Temperature	-20 to 60 C (-4 to 140 F)
Humidity	0 to 80% RH, Non-Condensing
Unit Dimensions (H x W x D, In)	1.7 x 17 x 6
Unit Weight (Lbs)	6.1

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.

WARRANTY REGISTRATION

Visit www.tripplite.com/warranty today to register the warranty for 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 web site for details.

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

Warning!

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. Do not use this equipment in the presence of a flammable anesthetic mixture with air, oxygen or nitrous oxide.

Tripp Lite follows a policy of continuous improvement. Product specifications are subject to change without notice.



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