



**8 Console 32 Port
Matrix KVM Switch
KM0832
User Manual**

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.



User Notice

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

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

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

Safety Instructions

General

- ◆ Read all of these instructions. Save them for future reference.
- ◆ Follow all warnings and instructions marked on the device.
- ◆ Do not place the device on any unstable surface (cart, stand, table, etc.). If the device falls, serious damage will result.
- ◆ Do not use the device near water.
- ◆ Do not place the device near, or over, radiators or heat registers.
- ◆ The device cabinet is provided with slots and openings to allow for adequate ventilation. To ensure reliable operation, and to protect against overheating, these openings must never be blocked or covered.
- ◆ The device should never be placed on a soft surface (bed, sofa, rug, etc.) as this will block its ventilation openings. Likewise, the device should not be placed in a built in enclosure unless adequate ventilation has been provided.
- ◆ Never spill liquid of any kind on the device.
- ◆ Unplug the device from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.
- ◆ The device should be operated from the type of power source indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.
- ◆ The device is equipped with a 3-wire grounding type plug. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not attempt to defeat the purpose of the grounding-type plug. Always follow your local/national wiring codes.
- ◆ Do not allow anything to rest on the power cord or cables. Route the power cord and cables so that they cannot be stepped on or tripped over.
- ◆ If an extension cord is used with this device make sure that the total of the ampere ratings of all products used on this cord does not exceed the extension cord ampere rating. Make sure that the total of all products plugged into the wall outlet does not exceed 15 amperes.
- ◆ To help protect your system from sudden, transient increases and decreases in electrical power, use a surge suppressor, line conditioner, or uninterruptible power supply (UPS).

- ◆ 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.

Rack Mounting

- ◆ Before working on the rack, make sure that the stabilizers are secured to the rack, extended to the floor, and that the full weight of the rack rests on the floor. Install front and side stabilizers on a single rack or front stabilizers for joined multiple racks before working on the rack.
- ◆ Always load the rack from the bottom up, and load the heaviest item in the rack first.
- ◆ Make sure that the rack is level and stable before extending a device from the rack.
- ◆ Use caution when pressing the device rail release latches and sliding a device into or out of a rack; the slide rails can pinch your fingers.
- ◆ After a device is inserted into the rack, carefully extend the rail into a locking position, and then slide the device into the rack.
- ◆ Do not overload the AC supply branch circuit that provides power to the rack. The total rack load should not exceed 80 percent of the branch circuit rating.
- ◆ 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.

Package Contents

The KM0832 package consists of:

- 1 KM0832 Matrix KVM Switch
- 1 Power Cord
- 1 Rack Mount Kit (brackets and Phillips head hex screws M3 x 8)
- 1 Foot Pad Set (4 pcs.)
- 1 User Manual*
- 1 Quick Start Guide
- 1 Registration Card

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

Read this manual thoroughly and follow the installation and operation procedures carefully to prevent any damage to the switch or to any other devices on the KM0832 installation.

* Changes may have been made to the manual since it was printed. Please visit our Website to check for the most up-to-date version.

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About This Manual

This user manual is provided to help you get the most from your KM0832 system. It covers all aspects of installation, configuration, and operation. An overview of the information found in the manual is provided below.

Overview

Chapter 1, Introduction, introduces you to the KM0832 System. Its purpose, features, and benefits are presented, and its front and back panel components are described.

Chapter 2, Installation, provides step-by-step instructions for setting up your installation, and explains some basic operating procedures.

Chapter 3, Administrator Utility, describes how to log into the KM0832 with your browser and explains the administrative procedures that are employed to configure the KM0832's working environment using the KM0832 Administrator Utility.

Chapter 4, OSD Operation, provides detailed information for configuring and controlling your installation using the KM0832's intuitive, mouse-driven On Screen Display (OSD) menus.


Chapter 5, Hotkey Operation, explains the concepts and procedures used to control the KM0832 from the keyboard.

Chapter 6, Keyboard Emulation, lists the keys for a PC-compatible keyboard to emulate the functions of the Mac and Sun keyboards.

An Appendix at the end of the manual provides technical and troubleshooting information.

Conventions

This manual uses the following conventions:

- | | |
|---|--|
| Monospaced | Indicates text that you should key in. |
| [] | Indicates keys you should press. For example, [Enter] means to press the Enter key. If keys need to be chorded, they appear together in the same bracket with a plus sign between them: [Ctrl+Alt]. |
| 1. | Numbered lists represent procedures with sequential steps. |
| ◆ | Bullet lists provide information, but do not involve sequential steps. |
| → | Indicates selecting the option (on a menu or dialog box, for example), that comes next. For example, Start → Run means to open the <i>Start</i> menu, and then select <i>Run</i> . |
|  | Indicates critical information. |

ALTUSEN Information

Technical Support

North America Technical Phone Support	Registered ALTUSEN product owners are entitled to telephone technical support. Call the ALTUSEN Technical Support Center: 949-453-8885.
International Technical Phone Support	<ol style="list-style-type: none">1. Contact your local dealer.2. Call the ALTUSEN Technical Support Center:(886-2) 8692-6959.
Email Support	E-mail your questions and concerns to: support@aten.com
Online Support <ul style="list-style-type: none">◆ Troubleshooting◆ Documentation◆ Software Updates	Online troubleshooting that describes the most commonly encountered problems and offers possible solutions to them; online documentation (including electronically available manuals); and the latest drivers and firmware for your product are available at the ALTUSEN Website: http://www.aten.com

Getting Help

For additional help, advice, and information, ALTUSEN provides several support options. If you need to contact ALTUSEN technical support with a problem, please have the following information ready beforehand:

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

Product Information

For information about all of ALTUSEN's products and how they can help you connect without limits, visit ALTUSEN on the web or contact an ALTUSEN Authorized Reseller.

- ◆ In the United States of America, call: 866-ALTUSEN (258-8736)
- ◆ In Canada and South America, call: 949-453-8885
- ◆ In all other locations, call: 886-2-8692-6789
- ◆ Visit ALTUSEN on the Web at <http://www.aten.com> for a list of locations and telephone numbers

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Chapter 1

Introduction

Overview

The KM0832 Matrix KVM Switch gives IT administrators in large corporations advanced control of multiple servers. Operators working at up to eight *consoles* (monitor, keyboard, and mouse) can independently and simultaneously take direct control of up to 32 computers. By cascading additional KM0832 and daisy chaining KM0432, 8 operators can access and control more than 8,000 computers.

The 8 consoles belonging to the *master* station (the root, or highest level KM0832) are able to access all the computers on the installation—those that are directly connected as well as those that are daisy chained and cascaded. The 4 consoles belonging to each of the *slave* stations (the daisy chained KM0432 switches) can only access the computers that are connected to them on the same daisy chain level (directly connected and cascaded).

The KM0832 features a modular design with automatic console conversion that allows any combination of PS/2 and USB consoles to control any combination of PS/2, USB, Sun, Mac, and serial computers. The RJ-45 KVM port (CPU port) connectors, combined with Auto Signal Compensation (ASC), allow signals to travel up to 300 meters between console module and KVM adapter cable (CPU module) and still maintain high video resolution, eliminating the need for KVM extenders, and allowing the installation to take advantage of the internal Cat 5e and Cat 6 wiring built in to most modern commercial buildings. In addition, use of RJ-45 connectors saves precious IT real estate by allowing a full 8 user ports and 32 KVM ports to reside in a single 1U system housing.

Setup is fast and easy—plugging cables into their appropriate ports is all that is entailed. Because the KM0832 intercepts keyboard and mouse input directly, there is no software to configure, so there is no need to get involved in complex installation routines or be concerned with incompatibility problems.

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

Features

- ◆ Eight consoles independently and simultaneously control up to 32 directly connected computers
- ◆ Supports up to 1024 user accounts
- ◆ Supports up to 256 group accounts
- ◆ Easy Web browser access to the KM0832 Administrator Utility to configure and maintain the KVM switch
- ◆ The KM0832 Administrator Utility supports access from a Virtual Private Network (VPN)
- ◆ Saves valuable time—backup and restore settings when changing root stations¹
- ◆ Three user account levels: Super Administrator, Administrator, and User
- ◆ Cascades three levels to support more than 8,000 computers
- ◆ Multiplatform support: PC, Mac, Sun, and serial
- ◆ Detachable front panel for easy access to front and rear of unit
- ◆ Console conversion—any type of console can control any type of computer; mixed combinations (PS/2 & USB) supported on both the console and computer sides
- ◆ Additional user port on front panel for easy system maintenance²
- ◆ Hot pluggable—add or remove components without having to power off the switch
- ◆ No software to install
- ◆ Convenient computer selection via intuitive hotkey combinations or On Screen Display (OSD) menus
- ◆ Daisy chain up to 7 additional KM0432 stations³
- ◆ OSD port list automatically expands when stations are added—port names are automatically reconfigured when the station sequence is changed
- ◆ OSD screen automatically adjusts to resolution changes
- ◆ Auto Scan feature for monitoring user-selected computers

1. Backup user and group accounts, station names, port access rights, and user profile settings.
2. Shares the same bus with User Port 1 on the rear panel.
3. If this feature is not operative on your unit, you will need a newer version of the firmware. Contact your dealer for details.

- ◆ PS/2 keyboard and mouse emulation—computers boot even when the console focus is elsewhere
- ◆ LCD, VGA, SVGA, XGA, and MultiSync support; DDC2B
- ◆ Superior video quality—1024 x 768 @ 60Hz for up to 300m; 1920 x 1440 @ 60Hz (distance depends on installation environment)
- ◆ Auto Signal Compensation (ASC) assures optimum video resolution for distances up to 300m between computers and consoles—no DIP switch setting required
- ◆ Free lifetime firmware upgrades
- ◆ Compact design—rack mounts in only 1U of rack space
- ◆ Multi-architecture compatibility
 - ◆ PC (x86/x64)
 - ◆ Macintosh PowerPC
 - ◆ Sun Microsystems Sparc

Benefits

The KM0832 Matrix KVM Switch saves time and money by allowing a single console to manage each of the connected computers. A KM0832 installation provides the following benefits:

- ◆ Eliminates the cost of a keyboard, monitor, and mouse for each computer.
- ◆ Eliminates the need for additional space for extra components.
- ◆ Saves on energy costs.
- ◆ Eliminates the inconvenience, time and effort required to move from one computer to another.
- ◆ Allows centralized control of computers located at non-contiguous locations on the site.

System Requirements

Consoles

The following hardware components are required for each console:

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

Console modules are required to connect consoles to the KM0832. They provide flexibility for your installation by allowing PS/2 and USB interfaces to be mixed and matched at the console side. The console modules currently available are listed in the table below. Contact your dealer for details or refer to the documentation included with your console module.

Function	Model Number
PS/2 Console Module	KA9222
PS/2-USB Combo Graphic Console Module	KA9233
USB Console Module	KA9272

Computers

The following hardware components are required for each computer:

- ♦ A VGA, SVGA, or MultiSync video graphics card with an HDB-15 port; or, for legacy Sun systems, a Sun 13W3 video port
- ♦ PS/2 mouse and keyboard ports (6-pin Mini-DIN), or at least one USB port; or, for legacy Sun systems, a Sun style keyboard port (8-pin Mini-DIN)

KVM adapter cables (CPU modules) are required to connect computers to the KM0832. Similar to console modules, they allow PS/2, USB, Sun, Mac, and serial computers to be attached to the KM0832. The KVM adapter cables currently available are listed in the table below. Contact your dealer for details.

Function	Model Number	
KVM adapter cable (CPU module)	For PS/2 computers	KA9120
	For Sun legacy computers	KA9130
	For Sun USB computers	KA9131
	For serial devices	KA9140
	For USB computers	KA9170

Cables

One or more of the following cables are required for use with the KM0832:

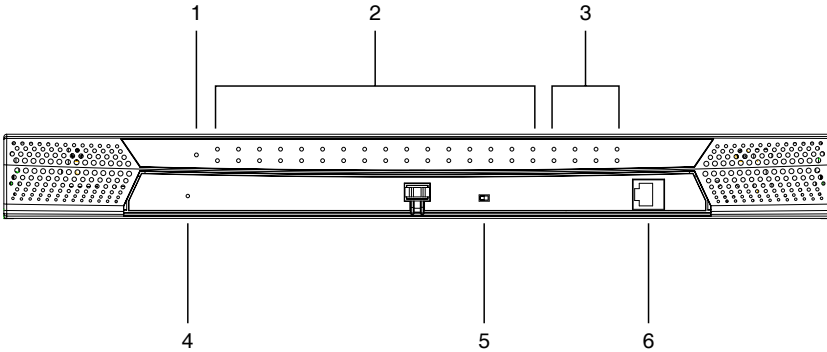
Function	Type
Console module or KVM adapter cable to KM0832 (see p. 109)	Cat 5 cable
Daisy chain cables	LIN5-50H1-H12 (15 cm) 2L-1700KM (60 cm) 2L-1701KM (1.2 m) 2L-1704KM (4 m)

Operating Systems

The KM0832 supports the following operating systems:

- ◆ Microsoft® Windows® 95, 98, 98SE, ME, NT, 2000, XP or later
- ◆ Mac OS® 8.6, 9.0, 9.1, X, 10.1, 10.2, 10.3 or later
- ◆ RED HAT® Linux® 6.0, 7.1, 7.2, 7.3, 8.0 or later
- ◆ Mandriva 9.0 or later
- ◆ SUSE Linux 8.2 or later
- ◆ Free BSD 3.5.1, 4.2, 4.3, 4.5 or later
- ◆ Sun Solaris™ 8 or later
- ◆ Novell NetWare 5.0, 6.0 or later
- ◆ IBM OS/2 Warp Ver 2.0
- ◆ IBM AIX 4.3 or later
- ◆ Microsoft DOS 6.22

KM0832 Front View



1. POWER LED

Lights to indicate that the KM0832 is powered on.

2. KVM Port LEDs

The port LEDs are multicolored (red/green/amber) and provide status information about their corresponding KVM ports as follows:

Color	Condition	Indication
Amber	Steady	Port is selected; connected computer is on
	Flashing	Port is selected; port is cascaded to a powered on KVM switch
Red	Steady	Port is selected; connected computer is off
Green	Steady	Port is not selected; connected computer is on
	Flashing	Port is not selected; port is cascaded to a powered on KVM switch
Off		Port is not selected; connected computer is off

3. User Port LEDs

Lights (green) to indicate that the console connected to the corresponding port is online. Flashes when cascaded from the KVM port(s) of a parent KVM station.

4. SYSTEM RESET Button

- ◆ Pressing and holding in this switch for more than three seconds performs a system reset.

Note: This switch is semi-recessed and must be pushed with a thin object—such as the end of a paper clip or a ballpoint pen.

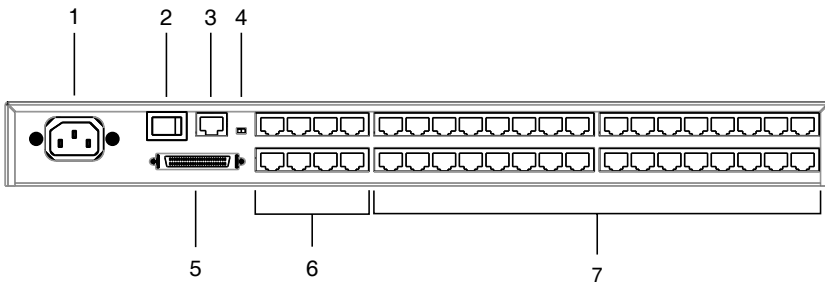
5. USER PORT 1 Switch

This switch selects which USER PORT 1 is active—the one on the front panel or the rear panel. Set it to FRONT to activate USER PORT 1 on the front panel; set it to REAR to activate USER PORT 1 on the rear panel.

6. USER PORT 1 (Maintenance Port)

This port is provided for convenient and easy access for system maintenance. It shares the same function with USER PORT 1 on the rear panel. By switching the USER PORT 1 switch to FRONT, USER PORT 1 on the rear panel is deactivated and USER PORT 1 on the front panel is activated. Use it just as you would any other user port. (You must return the USER PORT 1 switch to the REAR position to reactivate USER PORT 1 on the rear panel.)

KM0832 Rear View



1. Power Socket

The power cord to the AC source plugs in here.

2. POWER Switch

This is a standard rocker switch that powers the station on and off.

3. CONFIGURATION Port

The KM0832 is connected to the local network via the CONFIGURATION port. It provides access to the KM0832 Administrator Utility to configure the switch, create and manage user and group accounts, set device access permissions, upgrade firmware, etc.

4. F/W UPGRADE Switch

During normal operation and while performing a firmware upgrade, the firmware upgrade recovery switch should be in the NORMAL position. See p. 67 for firmware upgrade recovery details.

5. CHAIN OUT Port

When daisy chaining stations (see p. 23), the CHAIN OUT port is used to connect the lower stations in the chain.

Note: If this feature is not operative on your unit, you will need a newer version of the firmware. Contact your dealer for details.

6. USER PORT

The Cat 5 cables from the console modules plug in here.

- ◆ USER PORT 1 shares its KVM access with USER PORT 1 on the front panel. The USER PORT 1 switch (front panel) controls which of the two ports is active. See *USER PORT 1 Switch*, page 7, for more information.

7. KVM Ports

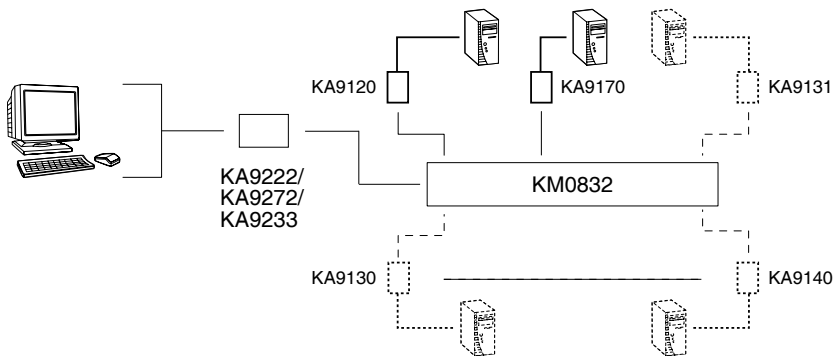
The Cat 5 cables that link the KVM adapter cables to the KM0832 plug in here.

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Chapter 2 Installation

Overview

For convenience and flexibility that allows mixing the PS/2 and USB interfaces, the KM0832's design utilizes *console modules* that act as signal translation intermediaries between the consoles and the switch, and *KVM adapter cables*, that serve as intermediaries between the switch and the computers:



A separate console module is required for each console; likewise, a separate KVM adapter cable is required for each computer. The console modules and KVM adapter cables are listed in the *Cables* section on page 4. Consult your dealer to find out which console modules and KVM adapter cables best fit your needs.

Before you Begin



1. Important safety information regarding the placement of this device is provided on page iv. Please review it before proceeding.
2. Ensure that all equipment to be connected is powered off.
3. Make sure that all devices you will be connecting up are properly grounded.
4. Unplug the power cords of any computers that have the Keyboard Power On function.

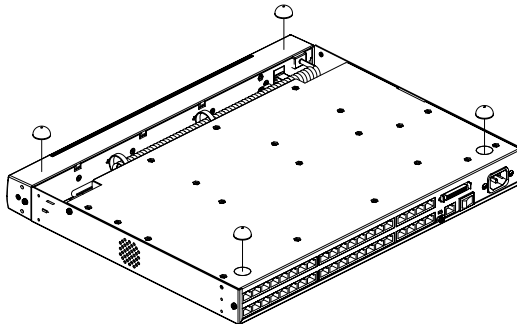
Stacking and Rack Mounting

The KM0832 can be stacked on the desktop or rack mounted by a variety of different methods in 1U of rack space. The procedures for each method are described in the following sections.

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

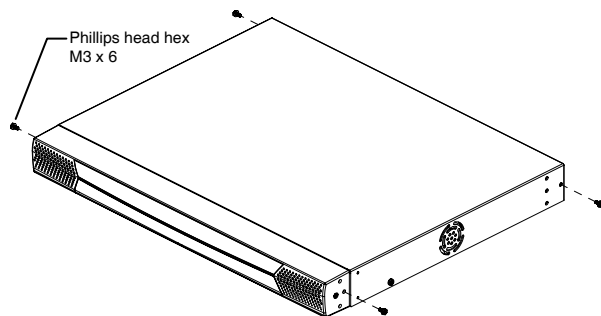
Stacking

The KM0832 can be placed on any level surface that can safely support its weight and the weight of the attached cables. Ensure that the surface is clean and free of materials that can block the exhaust vents or otherwise interfere with normal operation of the switch. A foot pad set is included with the unit. Peel the protective backing off of the foot pads, and then affix the foot pads to the bottom panel of the KM0832 at the corners, as shown in the diagram below.

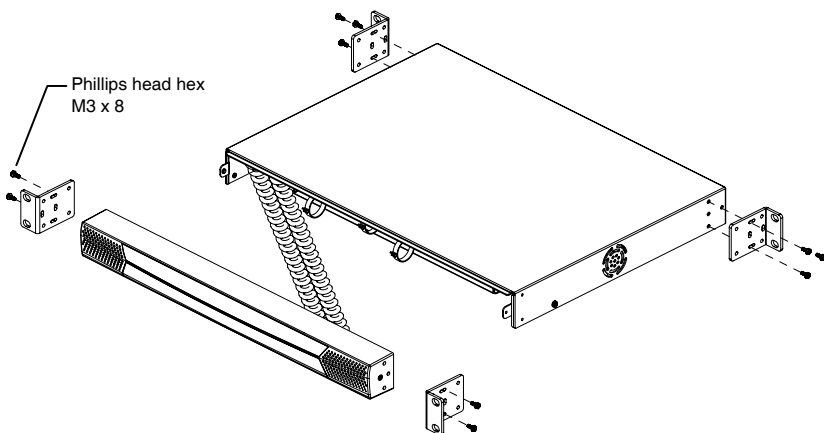


Rack Mounting—Split

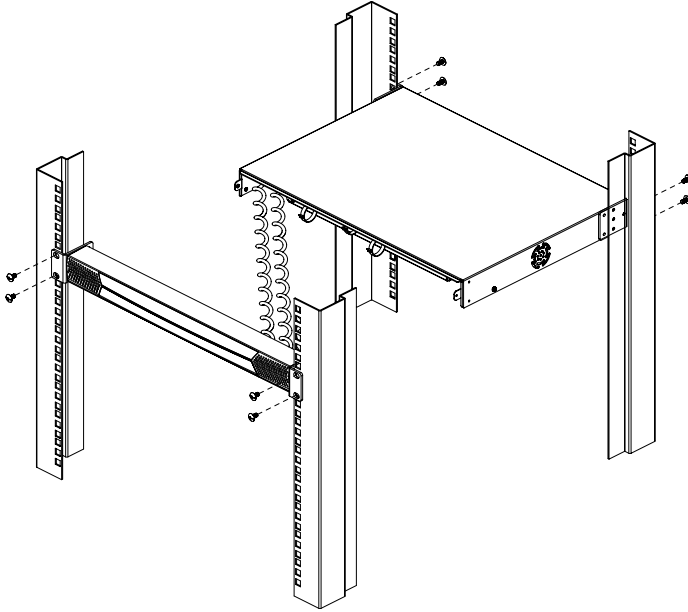
1. Remove the four screws from the sides of the unit, two at the front and two at the rear. The two screws at the front secure the detachable front panel to the chassis.



2. Detach the front panel from the chassis; however, leave the cables attached. Use the M3 x 8 Phillips head hex screws supplied with the rack mounting kit to screw the rack mounting brackets into the sides of the front panel and chassis.

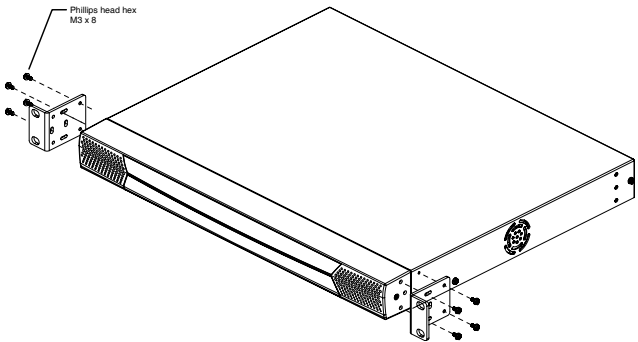


3. Place the switch in the rack. Position it so that the holes in the mounting brackets line up with those in the rack. Secure the mounting brackets to the front and rear of the rack. Cage nuts are provided for racks that are not prethreaded.

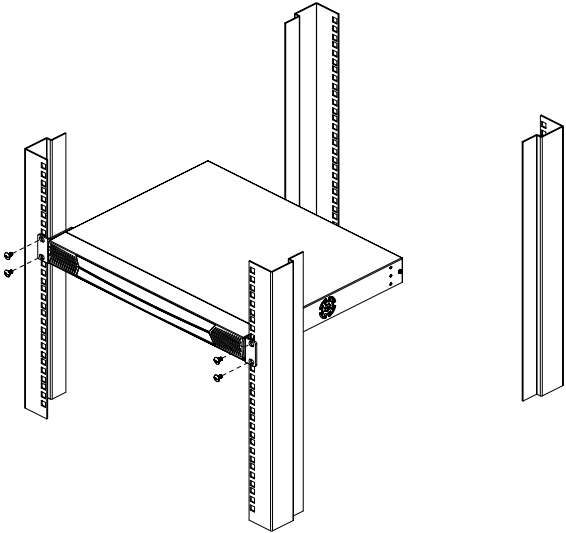


Rack Mounting—Front

1. Remove the two screws that secure the detachable front panel to the chassis. (See Step 1 under *Rack Mounting—Split*, page 13.)
2. Use the M3 x 8 Phillips head hex screws supplied with the rack mounting kit to screw the rack mounting brackets into the sides at the front of the unit.

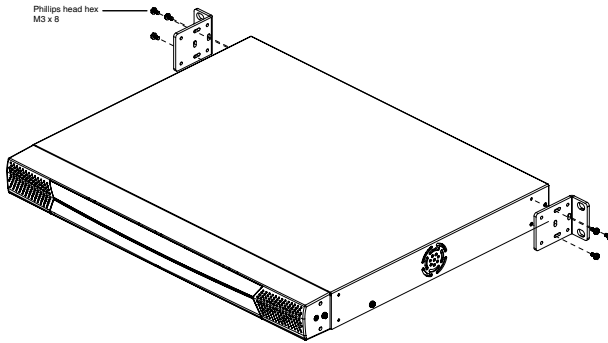


3. Place the switch in the rack. Position it so that the holes in the mounting brackets line up with those in the rack. Secure the mounting brackets to the front of the rack. Cage nuts are provided for racks that are not prethreaded.

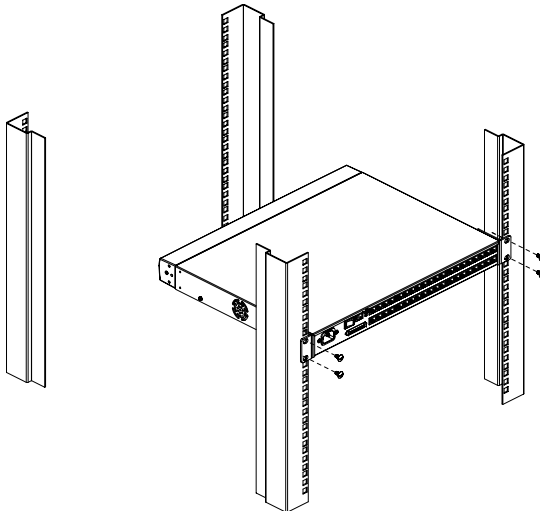


Rack Mounting—Rear

1. Remove the two screws from the sides at the rear of the unit. (See Step 1 under *Rack Mounting—Split*, page 13.)
2. Use the M3 x 8 Phillips head hex screws supplied with the rack mounting kit to screw the rack mounting brackets into the sides at the rear of the unit.



3. Place the switch in the rack. Position it so that the holes in the mounting brackets line up with those in the rack. Secure the mounting brackets to the rear of the rack. Cage nuts are provided for racks that are not prethreaded.



Single Stage Installation

In a single stage installation, there are no additional KVM switches cascaded or daisy chained down from the first station. To set up a single stage installation, refer to the diagram on page 18 (the numbers in the diagrams correspond to the numbered steps) and do the following:

1. Connect the console to the console module.
Plug your keyboard, mouse, and monitor into their respective ports on the console module. Each port is marked with an identifying icon.
2. Connect the console module to the KM0832.
Use Cat 5 cable to connect the *Link* port of the console module to one of the user ports on the KM0832's rear panel.

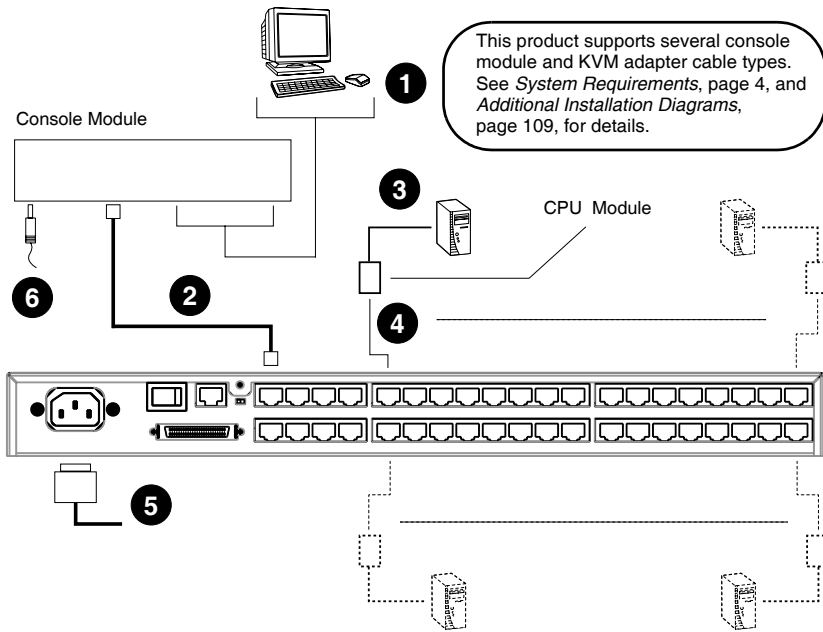
(Repeat steps 1 and 2 for all consoles that you wish to connect. Up to 8 consoles may be connected in this fashion.)

-
- Note:**
1. The distance between any console module and any KVM adapter cable must not exceed 300m (1000').
 2. We strongly recommend that you use Cat 5 shielded twisted pair (STP) cable.
-

3. Connect the KVM adapter to the computer.
Plug the connectors on the KVM adapter cable into the appropriate ports on the computer you are installing.
4. Connect the KVM adapter cable to the KM0832.
Use Cat 5 cable to connect a compatible KVM adapter cable to any available KVM port on the KM0832.

(Repeat steps 3 and 4 for all computers that you wish to connect. Up to 32 computers may be connected in this fashion.)
5. After all your computers have been cabled up, plug the female end of the power cord into the KM0832's power socket; plug the male end into an AC mains power source.
6. Connect the power adapter to the console module and to an AC mains power source appropriate for the device.
7. Turn on the power to the KM0832.
8. Turn on the power to the computers.

Single Stage Installation Diagram



Multilevel Installations

The number of computers that can be added to your installation can be greatly expanded by performing a multilevel installation. The KM0832 supports two types of multilevel installation:

- ◆ Cascading
- ◆ Daisy chaining

Overview

Cascading involves using the KVM port(s) of a *parent* KVM switch (one that is above a switch linked down from it) to connect to the user ports of a *child* KVM switch. With numerous child switches linked down from the parent, the effect is reminiscent of the way water cascades down over a waterfall.

Cascading adds capacity to a KVM installation, but the parent KVM switch loses at least one KVM port for each cascaded child switch.

Daisy chaining refers to connecting two KVM switches via dedicated daisy chain ports. The switches are strung together in a chain (see the diagram on p. 25), similar to the way children make chains of daisies by tying the end of one daisy to the head of another.

A daisy chained installation does not utilize KVM ports and user ports to connect one switch to another as in a cascaded installation, thus preserving valuable port space. The port capacity of a daisy chained installation is the total of all the KVM ports for all of the KVM switches on the chain. For example, a KM0832 has 32 KVM ports. On an installation with eight daisy chained switches (one KM0832 and seven KM0432s), the number of available ports is $32 \times 8 = 256$.

The KM0832 supports both daisy chaining and cascading, providing enormous capacity and flexibility for expanding the installation. The following sections provide the information and procedures involved in setting up cascaded and daisy chained installations.

Note: If the daisy chain feature is not operative on your unit, you will need a newer version of the firmware. Contact your dealer for details.

The table below lists the KVM switches that are compatible with the KM0832.

Expansion Type	Brand	Model Number	Name
Cascade	Altusen	KM0832	8 Console 32 Port Matrix KVM Switch
Daisy chain	Altusen	KM0432	4 Console 32 Port Matrix KVM Switch

Cascading

Another way of adding capacity is to cascade additional KVM switches from the KM0832's KVM ports. The KM0832 supports up to three levels of cascading. However, unlike daisy chaining, cascading does not increase the number of consoles that can be used to control the computers.

In a cascaded installation, the first KVM switch is considered the *first stage* station; cascaded switches are considered *second* and *third stage* stations.

Protocol Interface Cascading

Protocol interface cascading refers to cascading from a parent KVM switch to a child switch, where both switches use the same data transfer protocol. In this type of cascade, the OSD belonging to the separate switches are integrated so that when the consoles of the first stage switch invoke the OSD, all computers on the cascaded KVM installation are listed in the port directory.

The KM0832 can cascade up to three levels of KM0832 stations through protocol interface cascading. It supports more than 8,000 computers.

The maximum number of consoles on the first stage KM0832 that can simultaneously access computers attached to the cascaded KM0832 switches is dependent on the number of bus connections between each parent and child switch. A bus connection is established by connecting a KVM port of the parent switch to a user port of the child switch. The KM0832 supports a maximum of eight bus connections between parent and child switches.

In order for all eight consoles on the first stage KM0832 switch to simultaneously access the cascaded second and third stage switches, each parent KM0832 must make eight bus connections with each child switch that is cascaded from its ports. In other words, eight KVM ports of the parent switch must be connected to eight user ports of the child switch.

Note: Consoles in cascaded child stations cannot access ports in parent stations.

To set up a protocol interface cascade, refer to the installation diagram on p. 22 and do the following:

1. Connect the console to the console module.
Plug the keyboard, mouse, and monitor into the ports on the console module. Each port is marked with an identifying icon.
2. Connect the console module to the KM0832.
Use Cat 5 cable to connect the *Link* port of the console module to one of the user ports on the KM0832's rear panel.

(Repeat steps 1 and 2 for all consoles that you wish to connect. Up to 8 consoles may be connected in this fashion.)

Note: 1. The distance between any console module and any KVM adapter cable, or any first stage and third stage stations (or second stage, if there is no third stage), must not exceed 300m (1000').

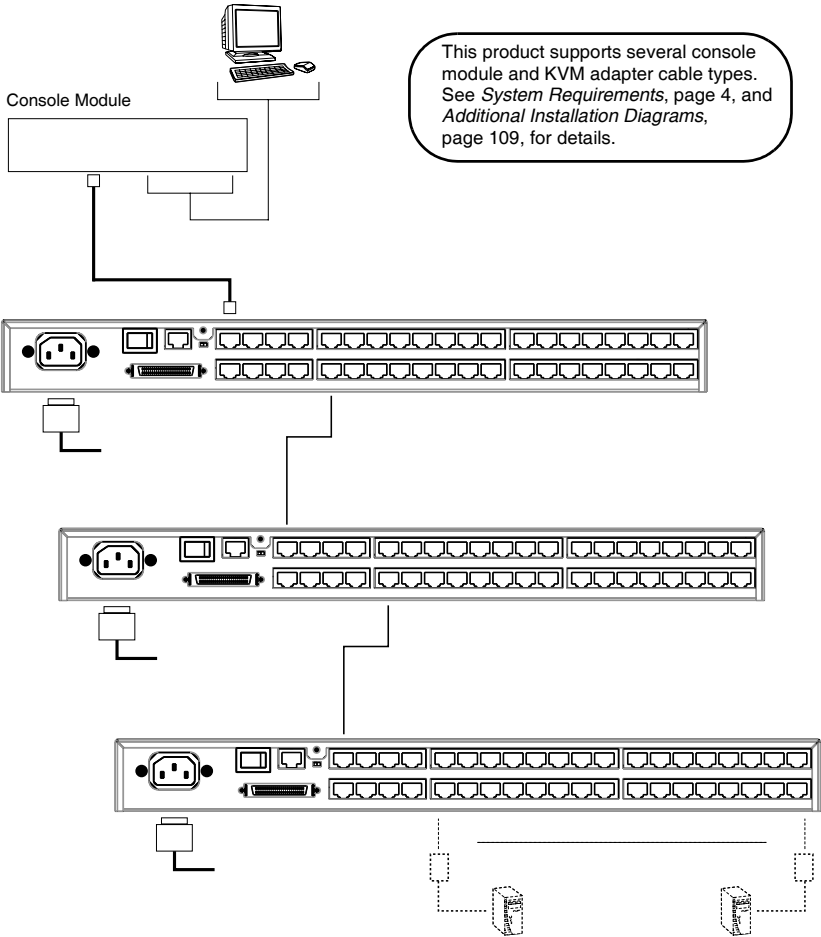
2. We strongly recommend that you use Cat 5 shielded twisted pair (STP) cable.
-

3. Use Cat 5 cable to connect up to eight KVM ports on the first stage station to the user ports on the second stage station. The number of consoles on the first stage KM0832 that can simultaneously access the cascaded switch is limited by the number of connections between the parent and child switches.

(Repeat step 3 for each second stage switch that you wish to cascade. If you wish to cascade any third stage switches, follow the instructions in step 3 when cascading them from the second stage switches.)

4. Use Cat 5 cable to connect KVM adapter cables to any available KVM ports; plug the connectors of the KVM adapter cables into the keyboard, video, and mouse ports of the computers you wish to install.
 5. Connect the power adapter(s) to the KVM adapter cable(s) and to an AC mains power source appropriate for the device.
 6. Plug the provided power cable into the power socket on the first stage KM0832 switch; connect the power cable to an AC mains power source with appropriate voltage for the KM0832, then turn on the KM0832.
 7. Wait one minute, and then repeat step 6 for each second stage KM0832.
 8. Wait one minute, and then repeat step 6 for each third stage KM0832.
 9. Turn on the power to all the computers.
-

Protocol Interface Cascade Diagram



Daisy Chaining

Up to 7 additional KM0432 stations can be daisy chained to the KM0832 master station. The KM0832 is capable of supporting eight independent consoles, while each KM0432 is capable of supporting four independent consoles. The KM0832 must occupy the *master* (first) position in a daisy chained installation, while the KM0432 must be used as the *slave* station(s).

In a complete daisy chained installation, the eight consoles that belong to the KM0832 can access and control all of the computers on the installation. When accessing the daisy chained KM0432 switches, the KM0832 consoles use the KM0432 OSD to access the computers connected to the daisy chained KM0432 switches. The four consoles belonging to each slave switch (KM0432) only control the computers (up to 32) connected to their switch.

Note: If the daisy chain feature is not operative on your unit, you will need a newer version of the firmware. Contact your dealer for details.

To set up a daisy chained installation, refer to the diagram on page 25 and do the following:

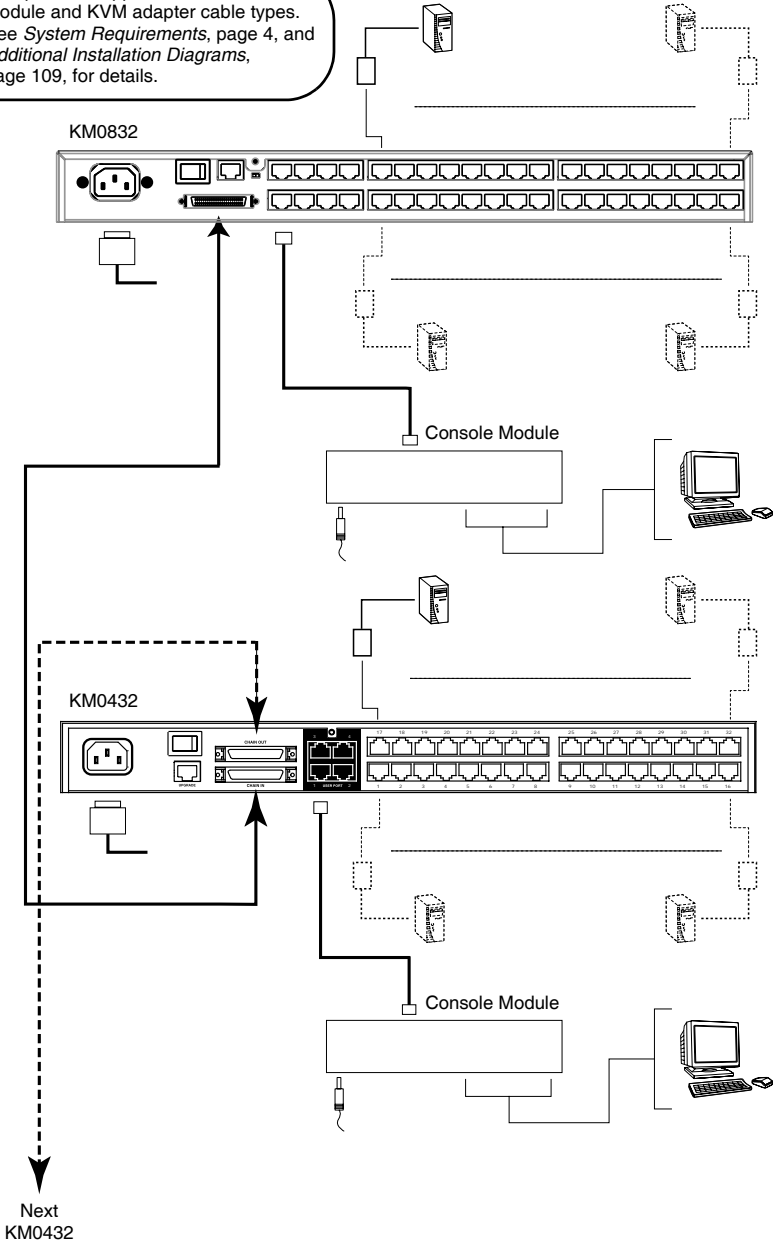
1. Use a daisy chain cable set (described in the *Cables* section, p. 5), to connect the *chain out* port of the master KM0832 station to the *chain in* port of the slave KM0432 station (first station out to second station in, second station out to third station in, etc.).

Note: The KM0832 must occupy the master (first) position in a daisy chained installation, while the KM0432 must be used as the slave station(s).

2. If you wish to install any console modules or KVM adapter cables on this switch, follow the procedures described in *Single Stage Installation* on p. 17.
(Repeat the above steps for any additional KM0432 stations you wish to add to the chain.)
3. Plug the power cords into an AC mains power source and into the power sockets on the KM0832 and KM0432 stations.
4. Power up the installation according to the following procedure:
 - a) Switch on the power for the first station (KM0832). Wait one minute for the station to ascertain its station position. (The KM0832 does not have a station ID because it always occupies the first station position.)
 - b) Switch on the power for each station on the installation in turn (second station, then third station, etc.). In each case, wait for the station position to be ascertained and displayed on the current station ID before powering on the next station. (The ID for the second stage station is **02**, the ID for the third stage station is **03**, etc.).
 - c) After all the stations are up, power on the computers.

Daisy Chain Installation Diagram

This product supports several console module and KVM adapter cable types. See *System Requirements*, page 4, and *Additional Installation Diagrams*, page 109, for details.



Network Installation

You can configure most KM0832 settings from within a Web browser. To do so, you need to install the KM0832 on the local network.

To install the KM0832 on the local network, plug a Cat 5 patch cable from your Ethernet network into the CONFIGURATION port on the rear panel of the KM0832.

Topology Considerations

The use of RJ-45 KVM port connectors, combined with Auto Signal Compensation (ASC), allow signals to travel up to 300 meters (1000 feet) and still maintain reliability and high video resolution. This allows the KM0832 installation to take advantage of the internal Cat 5e and Cat 6 wiring built-in to most modern commercial buildings.

Note: Although the KM0832 supports legacy Cat 5 wiring, the performance and video quality may degrade over longer distances. We strongly recommend that you use Cat 5 shielded twisted pair (STP) cable.

Since the data signals are not transmitted in packets, the transmission cannot go through network hubs or switches. Passive components such as patch panels, keystone jacks, patch cables, etc. can be used to channel the traffic, instead.

Basic Operations

Hot Plugging

The KM0832 supports *hot plugging*—components can be removed and added back into the installation by unplugging their cables from the ports without the need to shut the station down. In order for hot plugging to work properly, however, the procedures described below must be followed:

Switching Station Positions

On daisy chained installations, you can switch station positions by simply unplugging from the old parent and plugging into a new one.

Hot Plugging User Ports

The keyboard, monitor, and mouse all can be hot plugged. If you experience a problem after you plug in a new mouse, do a system reset by pressing the reset switch on the KM0832's front panel (see p. 7 for details). If this doesn't resolve the problem, restart the computers that have the problem.

Powering Off and Restarting

Powering off the KM0832 does not affect the computers attached to it. When you restart the KM0832, you will regain control immediately. To replace a KM0832, simply power it down, unplug the cables, plug them into the new station, and power the new station on.

Note: If any of the computers behave strangely after powering off and restarting, or changing a switch, simply restart the computer.

Port Selection

Port selection is accomplished either by means of the KM0832's OSD or by entering Hotkey combinations from the keyboard. *OSD Operation* is discussed in detail in Chapter 4; *Hotkey Port Selection* is discussed in Chapter 5.

Although hotkeys are handy for a single stage installation, we strongly recommend you use the more powerful and versatile OSD—especially for cascaded and daisy chained installations.

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Chapter 3

Administrator Utility

Overview

The KM0832 Administrator Utility enables network administrators to securely manage the KM0832 Matrix KVM Switch from anywhere on the LAN.

Administrators can manage users and groups, control port access, upgrade firmware versions, and perform many other administrative functions using the intuitive and easy-to-use menus and icons. Because it runs inside a Web browser, there is no software to install on either client computers or servers.

The KM0832 Administrator Utility offers simultaneous access for up to seven administrators and users. Security is maintained by a powerful combination of login password protection, three-tier user access, and port restrictions, ensuring that unauthorized users cannot gain control of your mission-critical servers.

An integrated tree view provides seamless navigation of cascaded KM0832 stations, and root station configurations are automatically synchronized with all cascaded switches.

Most features of the KM0832 Administrator Utility are also available from the text-based OSD. Changes made in the KM0832 Administrator Utility are reflected in the text-based OSD and vice-versa.

Setting the IP Address

You can use a Web browser, the IP Installer, or the OSD to configure the KM0832 for deployment on your local network. To use a Web browser to configure the KM0832 you will need a computer equipped with a Web browser, an Ethernet hub with at least 2 ports, and 2 Cat 5 patch cables.

To configure the network settings via a Web browser:

1. Plug one end of a Cat 5 patch cable into the Ethernet hub and the other end into the CONFIGURATION port on the rear panel of the KM0832.
2. Plug one end of a Cat 5 patch cable into the Ethernet hub and the other end into the Ethernet adapter of a computer equipped with a Web browser.
3. Make sure that your computer's IP address lies within the same subnet as that of the KM0832. (The default IP address for the KM0832 is *192.168.0.10*.) Set the IP address for your computer's network adapter to *192.168.0.XXX*, where *XXX* represents any value from 1–254 (except 10 and 254, which are reserved for the KM0832). (See *Factory Default Settings*, page 108, for a list of the KM0832's default network settings.)

Note: If you are using a proxy server, you might need to modify your computer's proxy server settings before accessing the KM0832.

4. Enter *192.168.0.10* in your Web browser's address bar. The KM0832 Login Webpage appears.
5. After logging in, assign a new IP address to the KM0832 that is appropriate for your local network. (See *Network Configuration*, page 38).
6. After logging out, reset your computer's network adapter settings back to their original values.

To configure the network settings via the IP Installer:

Go to the Altusen homepage and select the Webpage that is specific for the KM0832. From there you can download the IP Installer along with instructions on how to use it to assign an IP address to the KM0832.

To configure the network settings from within the OSD:

1. From the console, open the OSD. Navigate to the IP ADDRESS SETTING screen (see *SET NETWORK*, page 94).
2. Follow the instructions in this user manual to manually set the IP address or to view the current settings. (If DHCP is enabled, you will not be able to view the IP address.)

Logging In

The KM0832 Administrator Utility provides secure, password-protected access to the KM0832. A default super administrator account is provided to login and configure the initial settings:

Username: ADMIN

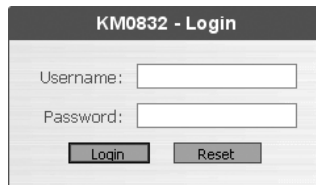
Password: ADMIN

(The username is not case sensitive; however, the password is case sensitive.)

We recommend that you change the account password immediately. Failure to do so may allow unauthorized users to access the KM0832 and attached servers. See *Configuring OSD User Settings*, page 62, to change the default password. After other user accounts have been added to the KM0832, it is no longer necessary to use the default super administrator account to log in. This account cannot be deleted and it does not appear in the list of usernames.

To log in to the KM0832 Administrator Utility:

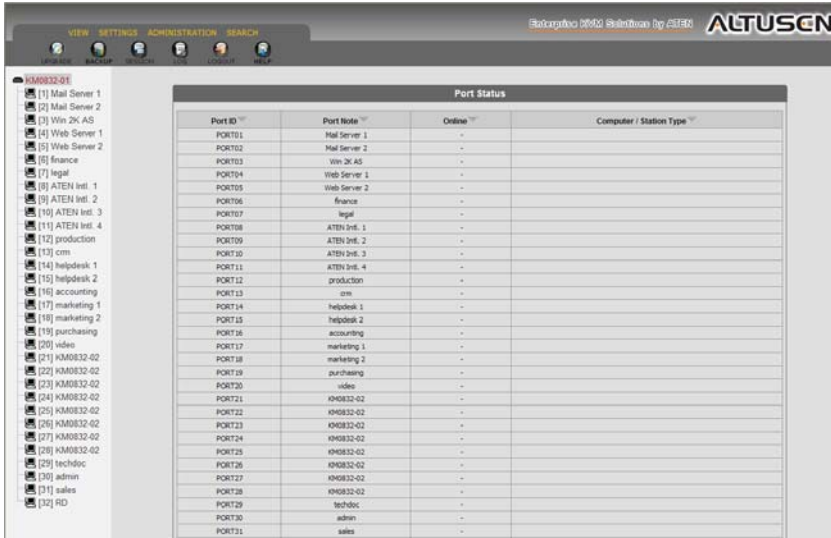
1. Enter the IP address of the KM0832 in the address bar of a Web browser and press **Enter**. The KM0832 Login Webpage appears.



The image shows a web browser window displaying the KM0832 Login page. The title bar of the browser window reads "KM0832 - Login". The page content includes a "Username:" label next to a text input field, a "Password:" label next to another text input field, and two buttons at the bottom: "Login" and "Reset".

2. Enter your username and password, and then click **Login**.

Upon successfully logging in, the KM0832 Administrator Utility Main Webpage appears.



KM0832 Administrator Utility

At the top of the KM0832 Administrator Utility Main Webpage is a menu bar. Underneath the menu bar are several icons. Menus and icons are described in the following pages.

A tree view at the left side of the Main Webpage displays the stations and ports. The KM0832 *station* icon (at the top of the tree) represents the root node. Under the station icon are either *computer* icons or *chain connector* icons, which represent the child nodes—one for each port and arranged in ascending order. Clicking on a computer icon opens the Port Management Webpage for that port. Clicking on a chain connector icon opens the Port Status Webpage for the cascaded station connected to that port.

In this chapter we describe how to use the menus and icons to configure the KM0832 for local operation, set up user and group accounts, configure ports, upgrade firmware, and other administrative functions.

Menus

The menus at the top of the KM0832 Administrator Utility Main Webpage are used to manage user accounts, group accounts, ports, and stations. Users can set screen viewing options, specify OSD preferences, change passwords, and search for stations and ports. Super administrators can configure network settings, set the date and time and view system information. The menus are described in the table below:

Menu Item	Description
View	Clicking the View menu opens the <i>View</i> Webpage, which allows users to configure the OSD screen settings.
Settings	Clicking the Settings menu opens the <i>Settings</i> Webpage. It allows users to change their account passwords. The user also can set the OSD activation keys, time to logout, and screen blanker, as well as turn on and off both the hotkey commands and the beeper, and set the idle timeout.
Administration	Clicking the Administration menu opens a pop-up menu. From this menu, administrators and super administrators can manage users, groups, ports and stations. In addition, super administrators can configure the network settings, set the date and time, and view the system information for the KM0832.
Search	Clicking the Search menu opens the <i>Search</i> Webpage. Users can input key strings in order to search for computers and stations on the KM0832 installation.

Icons

The icons on the bar at the top of the KM0832 Administrator Utility Main Webpage are for use only by administrators (except for the Logout icon). Only super administrators can upgrade firmware and view the Active Sessions Webpage.

Icon	Description
Upgrade	Clicking the Upgrade icon brings up the Firmware Upgrade Webpage. The super administrator can use this function to upgrade the firmware version.
Backup	Clicking the Backup icon opens the Backup and Restore Settings Webpage. It allows the administrator to backup the system configuration to a local computer, or restore the system configuration to the station.
Session	Clicking the Session icon opens the Active Sessions Webpage. This Webpage allows super administrators to see information about all the users who are currently logged into the KM0832 and provides information about each of their sessions. It also gives super administrators the option of forcing a user logout.
Log	Clicking the Log icon opens the Event Log Webpage, which allows administrators to view all of the events that took place on the KM0832 system.
Logout	Clicking the Logout icon closes the user's session.
Help	Clicking the Help icon opens the KM0832 help file.

Port Status

Port Status			
Port ID	Port Note	Online	Computer / Station Type
PORT01	Mail Server 1	-	
PORT02	Mail Server 2	-	
PORT03	Win 2K AS	-	
PORT04	Web Server 1	-	
PORT05	Web Server 2	-	
PORT06	finance	-	
PORT07	legal	-	
PORT08	ATEN Intf. 1	-	
PORT09	ATEN Intf. 2	-	
PORT10	ATEN Intf. 3	-	
PORT11	ATEN Intf. 4	-	
PORT12	production	-	
PORT13	crm	-	
PORT14	helpdesk 1	-	
PORT15	helpdesk 2	-	
PORT16	accounting	-	
PORT17	marketing 1	-	
PORT18	marketing 2	-	
PORT19	purchasing	-	
PORT20	video	-	
PORT21	KM0832-02	-	
PORT22	KM0832-02	-	
PORT23	KM0832-02	-	
PORT24	KM0832-02	-	
PORT25	KM0832-02	-	
PORT26	KM0832-02	-	
PORT27	KM0832-02	-	
PORT28	KM0832-02	-	
PORT29	techdoc	-	
PORT30	admin	-	
PORT31	sales	-	

After logging in to the KM0832 Administrator Utility, the Port Status Webpage displays by default. (You can display the Port Status Webpage at any time by clicking on the KM0832 station icon, or a computer icon for a cascaded station.) Users see only those ports for which they have *full access* or *view only* privileges. Click on an arrow at the head of a column to sort information in the column by ascending or descending order.

Column	Description
Port ID	Lists the KVM port number.
Port Note	Displays the port note that was assigned to the port (if any). For information about port notes see <i>Configuring Port Settings</i> , page 58.
Online	Indicates whether the device attached to the port is powered on.
Computer/Station Type	Displays information about the KVM adapter cable used to attach the computer to the port.

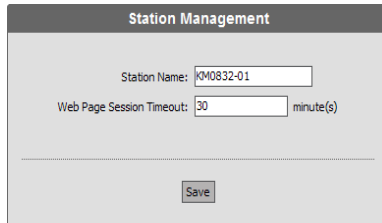
Naming Stations

To help distinguish one KVM switch from another in cascaded installations, super administrators and administrators can assign unique names to each KM0832.

Hint: Assigning a name to a station makes it possible to find it later using the search function.

To assign a station name to the KM0832:

1. If you are not logged in to the KM0832 Administrator Utility, then open the KM0832 Login page and login. The KM0832 Administrator Utility Main Screen will appear.
2. From the *Administration* menu, choose *Station Management*. The *Station Management* Webpage appears.



The screenshot shows a web form titled "Station Management". It has two input fields: "Station Name:" with the text "KM0832-01" and "Web Page Session Timeout:" with the value "30" and the unit "minute(s)". A "Save" button is positioned at the bottom center of the form.

3. Enter a unique name for the station that will differentiate it from all other stations on the KVM installation. For example, a first station switch in a cascade may be named 'KM0832-01'.
4. Click **Save**.

Setting the Webpage Session Timeout

Use the Webpage Session Timeout function to end the sessions of idle users. If there is no input from the user for the amount of time specified with the Webpage Session Timeout, the user's session in the KM0832 Administrator Utility automatically expires. The valid range for the Webpage Session Timeout is 1–255 minutes. A setting of 0 disables this function. The default is 3 minutes.

Note: Only 7 users can simultaneously log in to the KM0832 Administrator Utility; therefore, you should set the Webpage Session Timeout number accordingly.

To set the *Webpage Session Timeout* for the KM0832 Administrator Utility:

1. If you are not logged in to the KM0832 Administrator Utility, then open the KM0832 Login page and login. The KM0832 Administrator Utility Main Screen will appear.
2. From the *Administration* menu, choose *Station Management*. The *Station Management* Webpage appears.
3. In the *Webpage Session Timeout* field, specify the number of minutes to elapse before an inactive user is timed out of the *KM0832 Administrator Utility*. Enter '0' to disable this function.
4. Click **Save**.

Network Configuration

Network Configuration is a super administrator function. After you log in to the KM0832 Administrator Utility, you should configure the network settings for it on your network. The KM0832 Administrator Utility can also be made accessible from a Virtual Private Network (VPN). Network settings are configured through the *Network Settings* Webpage.

To open the *Network Settings* Webpage:

1. If you are not logged in to the KM0832 Administrator Utility, then open the KM0832 Login page and login. The KM0832 Administrator Utility Main Screen will appear.
2. From the *Administration* menu, choose *Super Adm Configuration > Set Network*. The *Network Settings* Webpage appears.

Network Settings

• DHCP Enabled
 Yes No

• Manual IP Address
IP Address:
Subnet Mask:
Default Gateway:
Primary DNS Server:
Alternate DNS Server:

• Port Settings
HTTP Port:
HTTPS Port:

• System Event Report Settings
Mail Notification: Yes No
SMTP Server Address:
SMTP Authentication: Yes No
Account Name:
Password:
From:
To:

IP Address

The KM0832 has the option to either manually enter a static IP address or use a DHCP server on your network to dynamically assign one. If you enable a DHCP server to assign an IP address to the KM0832, you can enable the KM0832 to send an e-mail notification when the IP address changes. See *System Event Reports*, page 40.

To use a DHCP server to assign an IP address, click **Yes** under *DHCP enabled*.

To manually assign an IP address:

1. Under *DHCP enabled*, click **No**.
2. In the fields under *Manual IP address*, enter the IP address, subnet mask, default gateway, and primary DNS server. You also can enter an alternate DNS server; however, it is not required.

Port Settings

Enter the network ports that the KM0832 will use to transfer Webpages and communicate with client programs. Typically, port 80 is used for Hyper Text Transfer Protocol (HTTP) communications, while port 443 is used for HTTPS (HTTP over Secure Socket Layer). Failure to assign a port number for each field will cause the KM0832 Administrator Utility to function incorrectly.

System Event Reports

The KM0832 can be configured to send an e-mail notification whenever the DHCP server assigns a new IP address to the KM0832. Enable the *Mail Notification* feature and specify the Simple Mail Transfer Protocol (SMTP) server address, information for a valid e-mail account on the server, and the e-mail address of the person to whom the message should be sent.

To enable system event reports:

1. Under *System Event Report Settings*, click **Yes** to enable *Mail Notification*.
2. Enter the address of the SMTP server. If your server requires authentication, click **Yes** to enable *SMTP Authentication*.
3. In the *Account Name* field, enter the username for a valid e-mail account on the SMTP server in Step 2.
4. In the *Password* field, enter the password for the e-mail account in Step 3.
5. In the *From* field, enter the e-mail address for the e-mail account in Step 3.
6. In the *To* field, enter the e-mail address of the person to whom the notification message should be sent.
7. Click **Save**.

Setting the Date and Time

Super administrators can set the date and time of the KM0832, which enables the *System Log*, *Active Sessions*, and *System Information* Webpages to maintain accurate time-sensitive data.

To set the date and time:

1. If you are not logged in to the KM0832 Administrator Utility, then open the KM0832 Login page and login. The KM0832 Administrator Utility Main Screen will appear.
2. From the *Administration* menu, choose *Super Adm Configuration > Date & Time*. The *Date & Time* Webpage appears.

Date & Time

Current Settings

Date (yyyy-mm-dd) 2006-04-14

Time (hh:mm:ss) 15:41:40

Change Settings

Synchronize with my computer

Date (yyyy-mm-dd) 2006-04-14

Time (hh:mm:ss) 15:41:43

Set manually

Date (yyyy-mm-dd) 2006-04-14

Time (hh:mm:ss) 15:41:29

Automatically synchronize with an NTP server on the Internet

Time Zone

Time Zone: (GMT-08:00) Pacific Time (US & Canada); Tijuana

Enable Daylight Saving Time (Summer Time)

Save

The current date and time of the KM0832 are shown at the top of the Webpage.

3. Under *System Date & Time*, select one of the following three options to set the date and time.
 - ◆ *Synchronize with my computer*: Select this option to synchronize the date and time of the KM0832 with that of the computer that you are using to access it.
 - ◆ *Set manually*: Select this option to manually enter the date and time. You must enter the date and time in the following way:
 - a) *Date*: Enter the date in Arabic numerals, year first, then the month, followed by the day. The year must carry four digit places, while the month and day each must carry two digit places. The year, month, and day each must be separated by a hyphen. For example, December 5th, 2005, should be written *2005-12-05*.
 - b) *Time*: Use 24-hour notation to enter the time as hours:minutes:seconds. For example, three o'clock in the afternoon should be written *15:00:00*.
 - ◆ *Automatically synchronize with an NTP server on the Internet*: Select this option to synchronize the date and time of the KM0832 with that of a Network Time Protocol (NTP) server on the Internet. To use this feature you will need to open UDP port 123 in your firewall.
4. From the *Time Zone* drop down list, select the time zone of the region where the KM0832 resides.
5. Select *Daylight Saving Time (Summer Time)* if it is used in your region.
6. Click **Save**. Your settings are saved and the system date and time are updated.

Group Management

Super administrators can create up to 256 groups on the KM0832, as well as modify and delete those groups. Grouping users together simplifies port management by enabling actions to be performed that affect a whole group of users, rather than only one. (You can still use the User Management Webpage to change individual user account settings. See *User Management*, page 46.)

All group management operations start from the *Group Management* Webpage. It shows all groups that have been created on the KM0832 and provides options for creating new groups and modifying or deleting existing groups.

Adding Groups

To add a new group:

1. If you are not logged in to the KM0832 Administrator Utility, then open the KM0832 Login page and login. The KM0832 Administrator Utility Main Screen will appear.
2. From the *Administration* menu, choose *Account Management > Group Management*. If no groups have been created the *No Local Groups* Webpage appears.
3. Click **New**. The *Group Information* Webpage appears.

Group Information

Group Name:

Note	Port Path	Computer / Station	No Access	View Only	Full Access
40010a	R-01	KM0832	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
	R-02		<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
	R-03		<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
	R-04		<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
	R-05		<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. In the *Group Name* field enter the name of the group you wish to create. Group names are case-sensitive and limited to a maximum of 15 characters.
5. From the list of ports, choose the type of access the group should have to each port. If there are any cascaded KM0832 stations, you can grant access

to ports on those stations as well. (For more information about port permissions, see *Port Management*, page 52.)

- Click **Save**. The new group is added to the *Group Management* Webpage.

Select	Group Name
<input checked="" type="radio"/>	tech doc

Modifying Groups

To edit a group name:

- If you are not logged in to the KM0832 Administrator Utility, then open the KM0832 Login page and login. The KM0832 Administrator Utility Main Screen will appear.
- Open the *Group Management* Webpage.

Select	Group Name
<input type="radio"/>	accounting
<input type="radio"/>	admin dept
<input type="radio"/>	computing
<input type="radio"/>	finance
<input type="radio"/>	helpdesk
<input type="radio"/>	marketing
<input type="radio"/>	purchasing
<input type="radio"/>	sales
<input checked="" type="radio"/>	tech doc

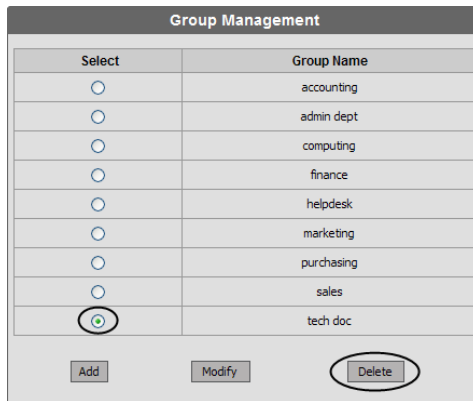
- Select a group name and click **Modify**. The *Group Information* Webpage appears.
- In the *Group Name* field edit the group name.
- Click **Save**. The *Group Management* Webpage reflects the changes you made to the group name.

Deleting Groups

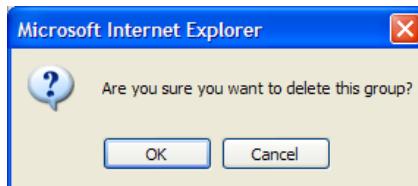
When you delete a group all users that are members of the group are also deleted. If you do not want to delete certain users in the group, first change the group membership of those users, and then delete the group.

To delete a group:

1. If you are not logged in to the KM0832 Administrator Utility, then open the KM0832 Login page and login. The KM0832 Administrator Utility Main Screen will appear.
2. Open the *Group Management* Webpage.



3. Select a group name and click **Delete**. The following dialog box appears:



4. Click **OK** to delete the group. The group name is removed from the *Group Management* Webpage and all users in the group are deleted.

User Management

Up to 1024 user accounts can be added to the KM0832 with no restriction on the number of any user type. Each user requires a unique user account to access the KM0832 through the local console or through the KM0832 Administrator Utility. Super administrators can add, modify, and delete all user types, while administrators can add, modify, and delete only other administrators and users.

The KM0832 requires each user to be added to a group; therefore, we suggest that you create groups before users. If you do not wish to create groups you may add users to the default group account. However, the default group account cannot be used to grant port access to group members. In that case, you will need to individually add users to the ports.

The *User Management* Webpage is similar to the *Group Management* Webpage. It shows all users that have been created on the KM0832 and their individual group memberships. It also provides options for creating new users and modifying or deleting existing users.

Adding Users

To add a user account:

1. If you are not logged in to the KM0832 Administrator Utility, then open the KM0832 Login page and login. The KM0832 Administrator Utility Main Screen will appear.
2. From the *Administration* menu, choose *Account Management > User Management*. If no users have been created the *No Local Users* Webpage appears.
3. Click **New**. The *User Information* Webpage appears.

User Information

Username:

Password:

Confirm Password:

Super Administrator
 Administrator
 User

Group Membership: ▼

Note	Port Path	Computer / Station	Un-assigned	No Access	View Only	Full Access
40010a	R-01	KM0832	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	R-02		<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	R-03		<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	R-04		<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	R-05		<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. Enter the username for the new account. Usernames are limited to a maximum of 15 characters and are not case-sensitive.
5. Enter a password and then reenter the password to confirm it. Passwords are limited to a maximum of 15 characters and are case-sensitive.

Note: If no password is entered, the KM0832 (and all attached servers and switches) can be accessed with the username alone.

6. Select an account type for the user. The following table shows the permissions for each account type. (Permissions apply only to the local station. For permissions in cascaded and daisy chained stations, see *Cascaded Installations*, page 57.)

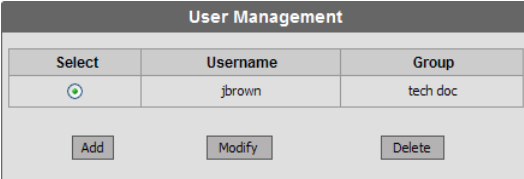
Permissions	User	Administrator	Super Administrator
Access ports*	•	•	•
Configure personal profile settings	•	•	•
Search	•	•	•
View online Help	•	•	•
Manage user/administrator accounts		•	•
Manage super administrator accounts			•
Manage stations		•	•
Manage ports		•	•
View/clear log file		•	•
Backup/restore settings		•	•
Manage group accounts			•
Configure network settings			•
Set date and time			•
View system information			•
Upgrade firmware			•
Invoke Broadcast Mode			•

* Super administrators and administrators have full access to all ports; however, users must be granted permission to access each port.

7. Select a group membership for the user. If you do not wish to create a group membership for the user, then select the default group account.

Note: Each user account can have only one group membership.

8. From the list of ports, choose the type of access the user should have to each port. If there are any cascaded KM0832 stations, you can grant access to ports on those stations as well. (For more information about port permissions, see *Port Management*, page 52.)
9. Click **Save**. The new user is added to the *User Management* Webpage.



Select	Username	Group
<input checked="" type="radio"/>	jbrown	tech doc

Modifying User Accounts

To edit a user account:

1. If you are not logged in to the KM0832 Administrator Utility, then open the KM0832 Login page and login. The KM0832 Administrator Utility Main Screen will appear.
2. Open the *User Management* Webpage.



The screenshot shows a web interface titled "User Management". It contains a table with three columns: "Select", "Username", and "Group". Each row in the table has a radio button in the "Select" column. The "Modify" button at the bottom of the interface is circled in red.

Select	Username	Group
<input type="radio"/>	billb	accounting
<input type="radio"/>	billt	production
<input type="radio"/>	dustin	purchasing
<input type="radio"/>	fernando	tech doc
<input type="radio"/>	hingdi	marketing
<input checked="" type="radio"/>	jbrown	tech doc
<input type="radio"/>	jeffrey	production
<input type="radio"/>	josiah	helpdesk
<input type="radio"/>	megan	production
<input type="radio"/>	michael	sales
<input type="radio"/>	mike	computing
<input type="radio"/>	opal	finance
<input type="radio"/>	rebekah	admin dept
<input type="radio"/>	rhonda	helpdesk
<input type="radio"/>	robert	tech doc
<input type="radio"/>	sam	sales
<input type="radio"/>	sharon	legal

Buttons: Add, **Modify**, Delete

3. Select a username and click **Modify**. The *User Information* Webpage appears.
4. Edit the user account settings. (Leave the password fields blank to keep the same password.)
5. Click **Save**. The user account is updated.

Deleting User Accounts

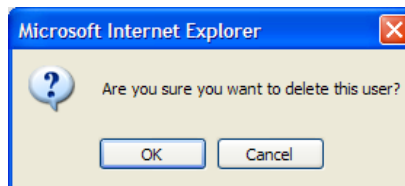
To delete a user account:

1. If you are not logged in to the KM0832 Administrator Utility, then open the KM0832 Login page and login. The KM0832 Administrator Utility Main Screen will appear.
2. Open the *User Management* Webpage.

User Management		
Select	Username	Group
<input type="radio"/>	billb	accounting
<input type="radio"/>	billt	production
<input type="radio"/>	dustin	purchasing
<input type="radio"/>	fernando	tech doc
<input type="radio"/>	hingdi	marketing
<input checked="" type="radio"/>	jbrown	tech doc
<input type="radio"/>	jeffrey	production
<input type="radio"/>	joshiah	helpdesk
<input type="radio"/>	megan	production
<input type="radio"/>	michael	sales
<input type="radio"/>	mike	computing
<input type="radio"/>	opal	finance
<input type="radio"/>	rebekah	admin dept
<input type="radio"/>	rhonda	helpdesk
<input type="radio"/>	robert	tech doc
<input type="radio"/>	sam	sales
<input type="radio"/>	sharon	legal

Buttons: Add, Modify, Delete

3. Select a username and click **Delete**. The following dialog box appears:



4. Click **OK** to delete the username. The username is removed from the *User Management* Webpage.

Port Management

KM0832 port access rights for users and groups are set on a port-by-port basis, giving administrators a high degree of control over which ports users can access and how they access the ports. To enable users to access ports, you must first configure the user access rights for each port. By default, all super administrators and administrators have full access to all ports.

Hint: Adding users to groups streamlines port configuration by allowing you to assign port access to whole groups of users at one time.

In this section we will discuss how to:

- ◆ Restore port defaults
- ◆ Set port access rights for users and groups
- ◆ Configure port settings and assign names to ports

Accessing Ports

All ports in the station are listed on the Port Select Webpage. Use the button at the bottom of the Webpage to restore station and port defaults.

To open the *Port Select* Webpage:

1. If you are not logged in to the KM0832 Administrator Utility, then open the KM0832 Login page and login. The KM0832 Administrator Utility Main Screen will appear.
2. From the *Administration* menu, choose *Port Management*. The *Port Select* Webpage appears.

Port Select	
Port ID	Port Note
IO-PORT1	Mail Server 1
IO-PORT2	Mail Server 2
IO-PORT3	Win 2K AS
IO-PORT4	Web Server 1
IO-PORT5	Web Server 2
IO-PORT6	finance
IO-PORT7	legal

The *Port Select* Webpage is divided into two columns. Port IDs, or port numbers, are listed in the column on the left in ascending order. Click the port ID to access the *Port Management* Webpage for that port. If a port has been assigned a name, the name appears to the right of the port ID in the port note column. The button at the bottom of the Webpage is described in the table below.

Button	Description
Restore Defaults	Click to revoke port access for users and groups, remove station names and port notes, and restore factory default settings for the Webpage Session Timeout, Port Operating System and Port Language fields. See <i>Factory Default Settings</i> , page 108.

Managing Port Access

Each port has an individual *Port Management* Webpage that is used to set port access rights, assign port names and configure other port settings. This also is true for cascaded child stations.

To open the *Port Management* Webpage for a port:

1. If you are not logged in to the KM0832 Administrator Utility, then open the KM0832 Login page and login. The KM0832 Administrator Utility Main Screen will appear.
2. In the KM0832 tree (on the left side of the Main Webpage), click on a computer icon. Each computer icon corresponds to a KM0832 port. The *Port Management* Webpage for that port appears. (See page 32 for more information about using the *computer* icons.)

-or-

Open the *Port Select* Webpage. Go to step 3.

3. In the Port ID column, click on a port ID to open the *Port Management* Webpage for that port. The *Port Management* Webpage appears.

The screenshot shows the 'Port Management' interface for port 'IO_PORT1'. It features a central area with 'Port Access' controls. On the left, there are two lists: 'Available Users' (including billb, billt, dustin, fernando, hingdi, jbrown, jeffrey, josiah, megan, michael, mike, opal, rebekah, rhonda, robert, sam, sharon) and 'Available Groups' (including accounting, admin_dept, computing, finance, helpdesk, legal, marketing, production, purchasing, sales, tech_doc). On the right, there are four empty boxes for 'No Access Users', 'View Only Users', 'Full Access Users', and 'Full Access Groups'. Between these lists and boxes are pairs of right and left arrow buttons for moving items between the available lists and the access categories.

The upper section of the *Port Management* Webpage is used to manage port access rights for users and groups. The boxes on the left side of the Webpage show all users and groups that have been created. The boxes on the right side of the Webpage govern port access rights. These boxes are discussed in the table below.

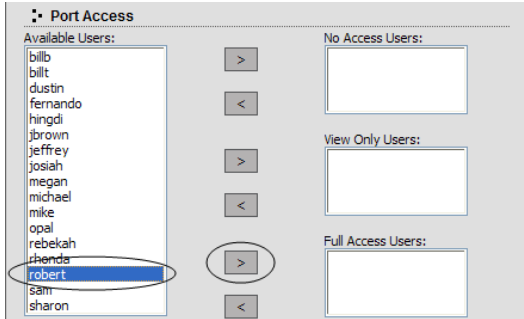
In the middle of the Webpage are six sets of arrows. Each set contains two arrows: one facing leftward (<) and the other facing rightward (>), which correspond to the boxes immediately to the left and right, respectively. Arrows are used to move users and groups from the boxes on the left into the boxes on the right and vice versa.

Box Name	Description
Available Users	All KM0832 users listed in this box do not yet have permission to access the port. Although super administrators and administrators also are listed here, they already have full access and do not need to be added to the ports.
Available Groups	All KM0832 groups are listed by group name in this box. Groups listed in this box do not have permission to access the port.
No Access Users	Users who are restricted from access to the port. Administrators can move certain users here to prevent others from accidentally granting port access to them. If a user listed in this box is a member of a group that has permission to access the port, placing the user in this box restricts the user from accessing the port.
View Only Users	Users who are only permitted to view video from the port.
Full Access Users	Users who are permitted both to view video from the port and to control the port. If a cascaded station is in the port, the user will not be able to access the ports of that station until granted access rights to the individual ports.
No Access Groups	Groups which are restricted from access to the port. Administrators can move certain groups here to prevent others from accidentally granting port access to them.
View Only Groups	Groups which are only permitted to view video from the port.
Full Access Groups	Groups which are permitted both to view video from the port and to control the port. If a cascaded station is in the port, the Group will not be able to access the ports of that station until granted access rights to the individual ports.

- Note:**
1. You cannot add more than 32 users and 32 groups to a port. If you need to add more than 32 users to a port, first add the users to groups and then add those groups to the port.
 2. If a user is granted both user and group access rights to the same port, the user access rights will be applied and not those of the group.

To grant port access rights to users or groups:

1. If you are not logged in to the KM0832 Administrator Utility, then open the KM0832 Login page and login. The KM0832 Administrator Utility Main Screen will appear.
2. Open the *Port Management* Webpage for the port where you wish to grant access rights.

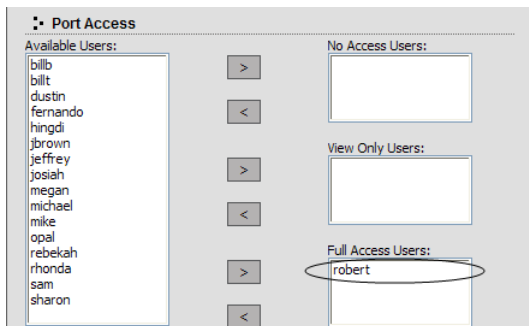


3. In the *Available Users* box, click on a username to highlight it.

-or-

In the *Available Groups* box, click on a group name to highlight it.

Click the appropriate rightward facing arrow (>) to move the selected user (or group) to the box on the right that corresponds to the access rights that you wish to grant to the user (or group). The user (or group) appears in the access rights box.



Repeat Steps 2 and 3 until you have assigned port access rights (or restrictions) for all users and groups.

If you make a mistake by adding a user or group to the wrong access rights box, simply highlight the username (or group name) again and then click the corresponding leftward facing arrow. The selected user (or group) is removed from the box and put back into its former position.

4. Click **Save**. The selected users (or groups) are given the permissions that were assigned in the last step.

Cascaded Installations

Super administrators and administrators have full access to all ports in cascaded child stations; however, they do not have permission to change system settings. To give users access to ports in cascaded child stations, first grant them access to the port to which the cascaded station is attached, and then grant access to the individual ports in the child station just as you would in the main station.

Configuring Port Settings

Before you configure port settings, first verify that the KVM adapter cable for the port you wish to configure is connected to the correct KVM port on the back panel of the KVM switch; otherwise, settings will not be saved. The fields in the lower section of the *Port Management* Webpage are described in the table below.

The screenshot shows a web form titled "Port Settings". It has three input fields: "Port Note" containing the text "ATEN Intl. 1", "OS Language" with a dropdown menu currently showing "English", and "Port OS" with a dropdown menu currently showing "WIN". Below these fields is a "Save" button.

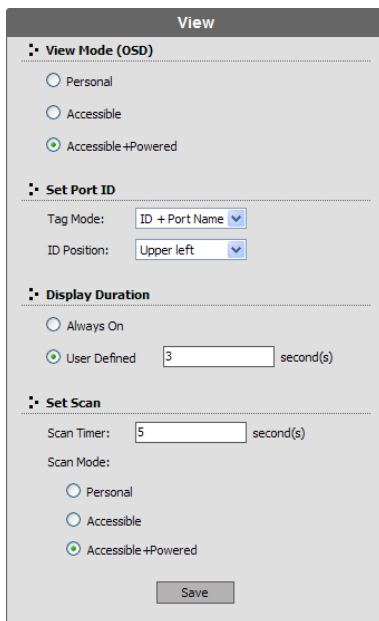
Field	Description
Port Note	<p>Enter a unique name or comment that will identify the port. The port note will appear on the <i>Port Status</i> and <i>Port Select</i> Webpages, in the KM0832 tree next to the <i>computer</i> icon, and in the OSD.</p> <p>Note: Adding spaces to the port note will cause it to display on multiple lines in the tree in some Web browsers.</p> <ul style="list-style-type: none"> ◆ If a matrix KVM switch station is connected to the port, the port note cannot be changed. ◆ If a KVM adapter cable is connected to the port, the name change is delivered to the KVM adapter cable. ◆ If nothing is connected, the port note can be changed; however, when the station is powered off the port note will be lost.
OS Language	The KM0832 supports three keyboard language layouts: U.S. English, French, and Japanese.
Port OS	The KM0832 supports three operating platforms: Windows, Mac, and Sun.

Setting the OSD View

After you create accounts for users, those users can log in to the KM0832 Administrator Utility. From there, they can set the OSD view settings for their accounts. This includes selecting the ports that will appear in the OSD port list; the type, position and duration of the port ID display; and the scan mode and scan duration. (The OSD is discussed in Chapter 4.)

To open the *View* Webpage:

1. If you are not logged in to the KM0832 Administrator Utility, then open the KM0832 Login page and login. The KM0832 Administrator Utility Main Screen will appear.
2. Click the **View** menu. The *View* Webpage appears.



The screenshot shows a web form titled "View" with the following sections:

- View Mode (OSD)**: Three radio buttons: Personal, Accessible, and Accessible+Powered.
- Set Port ID**: Two dropdown menus. "Tag Mode" is set to "ID + Port Name" and "ID Position" is set to "Upper left".
- Display Duration**: Two radio buttons: Always On and User Defined. The "User Defined" option has a text input field containing "3" followed by "second(s)".
- Set Scan**: A text input field for "Scan Timer" containing "5" followed by "second(s)". Below it, "Scan Mode" has three radio buttons: Personal, Accessible, and Accessible+Powered.

A "Save" button is located at the bottom center of the form.

View Mode

Many of the OSD functions only operate on the computers that are currently listed (displayed) on the OSD main screen. Use this function to broaden or narrow the scope of ports that are listed. The submenu choices and their meanings are given in the table below:

Choice	Meaning
Personal	The OSD lists the ports that the user has set as personal. See <i>SET PERSONAL VIEW</i> on page 83.
Accessible	The OSD lists only those ports that the user is permitted to access. See <i>Managing Port Access</i> on page 53.
Accessible + Powered	The OSD lists only those ports that the user is permitted to access and that have their attached computers powered on.

Set Port ID

When a user switches ports from the OSD, a port ID is shown. The table below explains the choices:

Choice	Meaning
Tag Mode	Selects how the port ID is displayed: the port number alone (ID); the port note alone (Port Name); or the port number plus the port note (ID + Port Name). The default is ID + Port Name.
ID Position	Allows you to position where the port ID appears on the monitor. The default is the upper left corner, but you can make it appear anywhere on the screen.

Display Duration

Display duration determines the length of time that the port ID displays on the screen after a port change. The table below explains the choices:

Choice	Meaning
Always On	Displays the port ID at all times.
User Defined	Lets you select the amount of time (from 1–255 seconds). The default is 3 seconds. A setting of 0 (zero) disables this function.

Set Scan

Select the ports that are viewed under Auto Scan Mode and the duration of time that they receive the KVM focus.

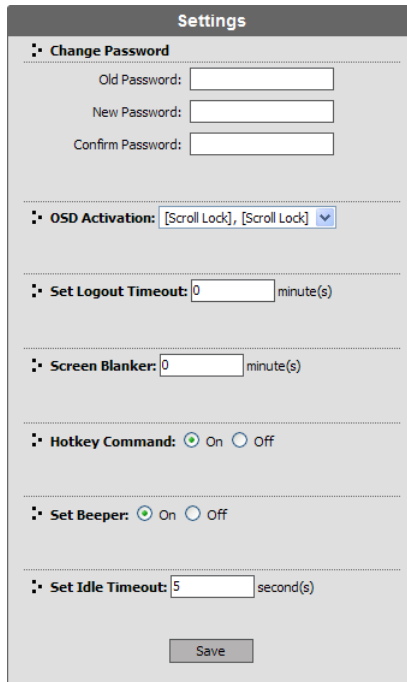
Setting	Function
Scan Timer	Determines how long the KVM focus dwells on each port as it cycles through the selected ports in Auto Scan Mode (see <i>F7 SCAN</i> , page 97). Key in a value from 1–255 seconds. The default is 5 seconds; a setting of 0 disables the Scan function.
Scan Mode	<p>Selects which computers will be accessed under Auto Scan Mode (see <i>F7 SCAN</i>, page 97). Choices are:</p> <p>Personal—only those ports that the user has set as personal. See <i>SET PERSONAL VIEW</i> on page 83.</p> <p>Accessible—only those ports that the user is permitted to access. See <i>Managing Port Access</i> on page 53.</p> <p>Accessible + Powered—only those ports that the user is permitted to access and that have their attached computers powered on.</p> <p>The default is Accessible + Powered.</p>

Configuring OSD User Settings

This function allows the user to change the account password and set up a unique working environment. A separate profile for each user is stored by the OSD and is activated according to the *username* that is provided during login.

To open the *Settings* Webpage:

1. If you are not logged in to the KM0832 Administrator Utility, then open the KM0832 Login page and login. The KM0832 Administrator Utility Main Screen will appear.
2. Click the **Settings** menu. The *Settings* Webpage appears. (The Settings Webpage fields are described in the table on the following page.)



The screenshot displays the 'Settings' webpage with the following configuration options:

- Change Password:** Three input fields for 'Old Password:', 'New Password:', and 'Confirm Password:'.
- OSD Activation:** A dropdown menu currently showing '[Scroll Lock], [Scroll Lock]'.
- Set Logout Timeout:** An input field with '0' and the unit 'minute(s)'.
- Screen Blanker:** An input field with '0' and the unit 'minute(s)'.
- Hotkey Command:** Radio buttons for 'On' (selected) and 'Off'.
- Set Beeper:** Radio buttons for 'On' (selected) and 'Off'.
- Set Idle Timeout:** An input field with '5' and the unit 'second(s)'.

A 'Save' button is located at the bottom of the settings panel.

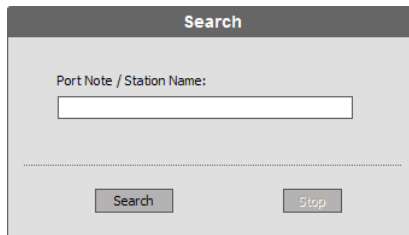
Setting	Function
Change Password	Enter the old account password. Enter a new password, and then reenter the password to confirm it. Or, do not enter anything to leave the password unchanged.
OSD Activation	<p>Selects which Hotkey activates the OSD function: [Scroll Lock] [Scroll Lock] or [Ctrl] [Ctrl].</p> <p>Since the Ctrl key combination may conflict with programs running on the computers, the default is the Scroll Lock combination.</p>
Set Logout Timeout	This function allows you to specify the number of minutes to elapse before an inactive user is timed out of the OSD. If there is no input from the user for the specified amount of time, the user will be logged out automatically.
Screen Blanker	If there is no input from the console for the amount of time set with this function, the screen is blanked. Key in a value from 1–30 minutes, then press [Enter]. A setting of 0 disables this function. The default is 0 (disabled).
Hotkey Command	Enables / Disables the Hotkey Command function in case a conflict with programs running on the computers occurs. The default is enabled.
Set Beeper	When set to ON, the beeper sounds whenever the port is switched, when activating the Auto Scan function (see page 97), or when an invalid entry is made on an OSD menu. The default is ON.
Set Idle Timeout	<p>If there is no input from the console accessing a particular port for the amount of time set with this function, the port is released, allowing it to be accessed by the other consoles.</p> <p>To set the timeout value, key in a number from 0–255 seconds, then press [Enter].</p> <p>If the number is 0 [zero], this function is disabled. The default is 5 seconds.</p>

Search

The *Search* function provides a convenient method to easily locate ports and cascaded stations by port note or by station name.

To search for a port:

1. If you are not logged in to the KM0832 Administrator Utility, then open the KM0832 Login page and login. The KM0832 Administrator Utility Main Screen will appear.
2. Click the **Search** menu. The *Search* Webpage opens.

The image shows a web browser window titled "Search". Inside the window, there is a label "Port Note / Station Name:" followed by a text input field. Below the input field, there are two buttons: "Search" and "Stop".

3. In the field, enter the port note of the port for which you are searching; or, enter the station name of a cascaded station. All entries that match or contain the search term(s) appear in a list.

Note: You do not need to enter the entire port note; a partial port note is acceptable. For example, if you want to search for a port with port note **WIN 2K AS**, you only need enter a portion of the port note, i.e. **WIN**. The same applies when searching for stations.

Firmware Upgrade

Super administrators can upgrade firmware for the KM0832 as well as for attached console modules and KVM adapter cables. If there are any directly cascaded KM0832 switches, they are also upgraded at the same time. As new versions of the KM0832 firmware become available, they can be downloaded from our website. Check the website regularly to find the latest information and packages.

Before You Begin

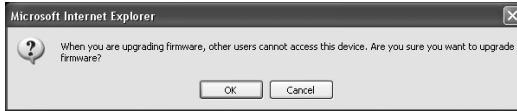
To prepare for the firmware upgrade:

1. From a computer that is not part of your KVM installation go to the Altusen website and choose the model name that relates to your device. A list of available firmware upgrade packages appears.
2. Choose the firmware upgrade package that you want to install (usually the most recent) and download it to your computer.
3. From that computer, open a Web browser and log in to the KM0832 (see *Logging In* on page 31).
4. Shut down all of the computers—but not the stations—on your KVM installation.

Performing the Upgrade

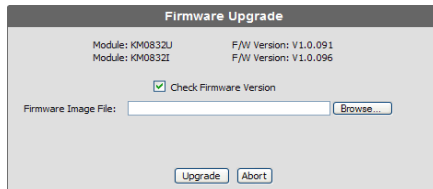
To upgrade the firmware:

1. If you are not logged in to the KM0832 Administrator Utility, then open the KM0832 Login page and login. The KM0832 Administrator Utility Main Screen will appear.
2. Click the **Upgrade** icon. The following dialog box appears:



3. Click **OK** to enter Firmware Upgrade mode. This may take a few minutes while the system prepares to upgrade the firmware. Users with active sessions in the OSD will be informed that they should log out. (Some consoles may be automatically logged out.)

After a few minutes, the *Firmware Upgrade* Webpage appears. It displays the current firmware version(s) of the KM0832 module(s).



4. Click **Browse**. The *Choose file* dialog box appears.
5. Navigate to the directory where the new firmware upgrade package file was saved, select the file, and click *Open*. The path and filename appear in the *Firmware Image File* field.
6. Select or deselect *Check Firmware Version*.
 - ◆ If you select *Check Firmware Version*, the Utility compares the firmware level of the KM0832 with that of the upgrade files. If it finds that the current firmware version of the KM0832 is higher, a dialog box appears that gives you the option to Continue or Cancel.
 - ◆ If you do not select *Check Firmware Version*, the Utility installs the upgrade files without comparing the version levels.

7. Click **Upgrade** to begin upgrading the firmware.

-or-

Click **Abort** to cancel the firmware upgrade. The KM0832 will automatically reboot, requiring you to log in again.

Note: It takes approximately 7 minutes to upgrade the firmware for a single stage installation, or 17 minutes for a cascaded installation. Please be patient while the firmware is upgrading.

8. After the firmware upgrade completes, log out to reset the KM0832.

Upgrade Failed

If a device fails to complete the upgrade successfully, start the firmware upgrade procedure again (see page 66).

Firmware Upgrade Recovery

If the firmware upgrade procedure is aborted prematurely (due to a power outage, for example), the switch that was being upgraded at the time may become inoperable, and may be incapable of accepting a normal firmware upgrade.

To recover from a failed firmware upgrade:

1. Slide the firmware upgrade recovery switch (see page 8) to the RECOVER position.
2. Perform a system reset (see *System Reset Button* on page 7).
3. Slide the recovery switch back to the NORMAL position.
4. Start the firmware upgrade procedure again (see page 66).

Backup and Restore Settings

Super administrators and administrators can back up KM0832 system settings to a file and later restore them to the system. Backing up system settings is helpful: (1) before making changes, (2) if you install multiple KM0832 switches in separate installations and you want to use the same settings, (3) if the KM0832 has a problem and needs to be replaced, and (4) when upgrading to a newer version of the KM0832.

Action	Description
Backup	Backs up root station settings, user and group accounts, user profiles, port access rights, and shortcuts.
Restore	Deletes the current root station settings, user and group accounts, user profiles, port access rights, and shortcuts and restores those saved in the configuration backup file.

To back up system settings:

1. If you are not logged in to the KM0832 Administrator Utility, then open the KM0832 Login page and login. The KM0832 Administrator Utility Main Screen will appear.
2. Click the **Backup** icon. The *Backup and Restore Settings* Webpage appears.

3. Under *Backup Configuration*, enter a password for the backup configuration file if you want password protect it; otherwise, leave this field blank. There are no restrictions on characters that can be used in passwords.

4. Click **Save**. The *File Download* dialog box appears.
5. Click **Save**. The *Save As* dialog box appears.
6. Navigate to the directory where you want to save the file and click **Save**. The backup configuration file is saved in the directory.

To restore system configurations:

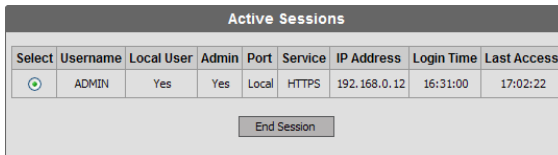
1. If you are not logged in to the KM0832 Administrator Utility, then open the KM0832 Login page and login. The KM0832 Administrator Utility Main Screen will appear.
2. Click the **Backup** icon. The *Backup and Restore Settings* Webpage appears.
3. Under *Restore Configuration*, enter the password that you used to password protect the backup configuration file. If you did not password-protect the file leave this field blank.
4. Click **Browse**. The *Choose file* dialog box appears.
5. Navigate to the directory where the configuration backup file was saved and select the file. The path and filename appear in the field.
6. Click **Restore**. The backup configuration file settings replace all current settings. When the configurations are finished restoring the KM0832 will reboot. A message will be sent to OSD users with active sessions to notify them that configurations are being restored and that the system will reboot.

Viewing and Ending User Sessions

The KM0832 lists all users who are currently logged in to the KM0832 Administrator Utility and shows details about their sessions. If a user account is misused or if another user needs to login to the KM0832 Administrator Utility, super administrators can view and end the sessions of other super administrators, administrators and users. However, users with active sessions in the KM0832 OSD are not listed on this Webpage and their sessions cannot be ended.

To view current user sessions:

1. If you are not logged in to the KM0832 Administrator Utility, then open the KM0832 Login page and login. The KM0832 Administrator Utility Main Screen will appear.
2. Click the **Session** icon. The *Active Sessions* Webpage appears. It displays information about the users who have active sessions in the KM0832 Administrator Utility.

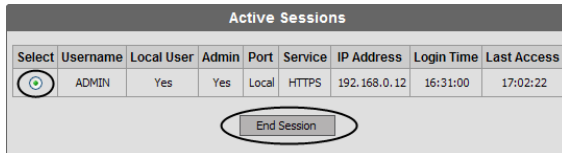


The screenshot shows a webpage titled "Active Sessions" with a table containing one row of session data. Below the table is a button labeled "End Session".

Select	Username	Local User	Admin	Port	Service	IP Address	Login Time	Last Access
<input type="checkbox"/>	ADMIN	Yes	Yes	Local	HTTPS	192.168.0.12	16:31:00	17:02:22

To end a user session:

1. If you are not logged in to the KM0832 Administrator Utility, then open the KM0832 Login page and login. The KM0832 Administrator Utility Main Screen will appear.
2. Click the **Session** icon. The *Active Sessions* Webpage appears.



Select	Username	Local User	Admin	Port	Service	IP Address	Login Time	Last Access
<input checked="" type="radio"/>	ADMIN	Yes	Yes	Local	HTTPS	192.168.0.12	16:31:00	17:02:22

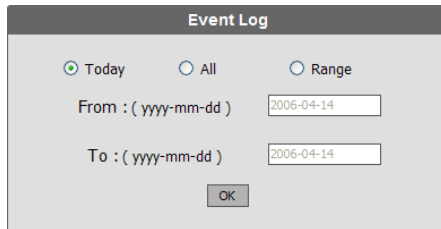
3. Select the user for whom you wish to end the session, and click **End Session**. The user is logged out of the KM0832 and the username no longer appears on the Active Sessions Webpage.
Repeat Step 3 for each user that you want to log out of the KM0832.

Viewing and Clearing the Log File

The log file is a record of events that happen in the KM0832 Administrator Utility. It records events such as system boot up and when important administrative changes are made. Each entry is recorded with the date and time that the event happened. User log ins and log outs are also recorded, and in addition to the date and time, also include the user's username and IP address. Only super administrators and administrators can view and clear the log file.

To view the log file:

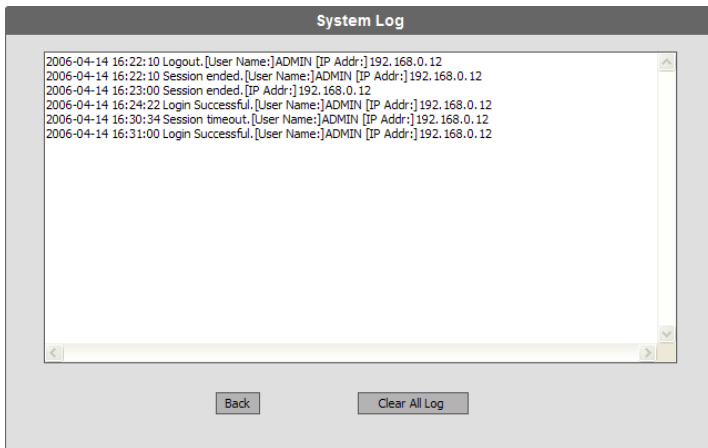
1. If you are not logged in to the KM0832 Administrator Utility, then open the KM0832 Login page and login. The KM0832 Administrator Utility Main Screen will appear.
2. Click the **Log** icon. The *Event Log* Webpage appears.



The screenshot shows a dialog box titled "Event Log". It contains three radio button options: "Today" (which is selected), "All", and "Range". Below these options are two text input fields. The first field is labeled "From : (yyyy-mm-dd)" and contains the date "2006-04-14". The second field is labeled "To : (yyyy-mm-dd)" and also contains the date "2006-04-14". At the bottom center of the dialog box is an "OK" button.

3. Select one of the following three ways to view log file events:
 - ◆ Today: Select this option to view only events that happened today.
 - ◆ All: Select this option to view all events in the log file.
 - ◆ Range: Select this option to view events that happened over a period of one or more days. Enter the beginning date in the *From* field and the ending date in the *To* field. Enter the date in Arabic numerals, year first, then the month, followed by the day. The year must carry four digit places, while the month and day each must carry two digit places. The year, month, and day each must be separated by a hyphen. For example, December 5th, 2005, should be written *2005-12-05*.

4. Click **OK**. The *System Log* Webpage appears.



Each line in the log file is a record of an event that occurred in the KM0832 Administrator Utility during the period of time that you specified on the *Event Log* Webpage. The log file keeps up to 4096 events in memory. Once that amount is reached, the oldest events are discarded as new events are recorded.

Note: In the case that an unforeseen event happens, such as a power outage, if the log file is full at the time, when the KM0832 is restarted the log file will only show the most recent 2048 lines.

5. Click **Back** to return to the *Event Log* Webpage.

To clear the contents of the log file:



If you delete the contents of the log file you cannot recover them; however, this will not affect future log events.

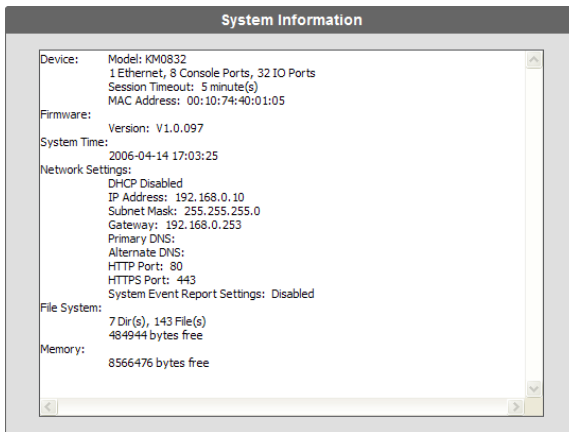
1. Follow Steps 1–4 for viewing the log file.
2. At the bottom of the *System Log* Webpage, click **Clear All Log**. All events in the log file are deleted.

Viewing System Information

Super administrators can view information about the KM0832 system through the *System Information* Webpage. It shows information about the device, firmware version, system time, network settings, and the file system.

To view system information:

1. If you are not logged in to the KM0832 Administrator Utility, then open the KM0832 Login page and login. The KM0832 Administrator Utility Main Screen will appear.
2. From the *Administration* menu, choose *Super Adm Configuration > System Information*. The *System Information* Webpage appears.



3. If you are not able to view some of the information, use the scroll bar to scroll down until you can view it.

Viewing Help

Most KM0832 Administrator Utility functions are described in Help.

To open the help file:

1. If you are not logged in to the KM0832 Administrator Utility, then open the KM0832 Login page and login. The KM0832 Administrator Utility Main Screen will appear.
2. Click the **Help** icon. The *KM0832 Help* appears.

Logging Out

Click the *Logout* icon to end sessions in the KM0832 Administrator Utility. If a user closes the browser without first logging out, the user's session will remain active for two minutes, after which time it will be automatically ended. For security reasons we recommend that you either close your web browser or clear the browser cache after logging out.

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Chapter 4

OSD Operation

OSD Overview

The KM0832 OSD provides a visual, menu-driven, mouse-enabled, interface that offers quick and convenient computer access and control, as well as efficient system administration including user management (access rights, passwords, etc.). Changes made in the OSD are reflected in the KM0832 Administrator Utility and vice-versa.

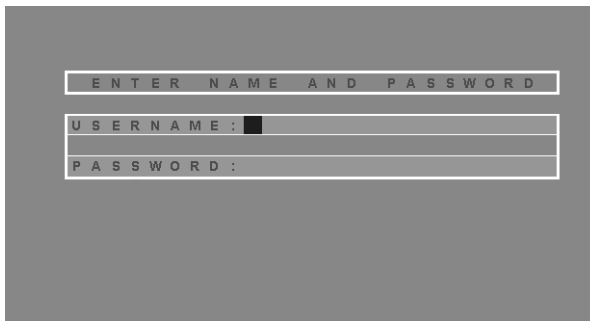
Each OSD menu option activates a function that configures and controls the operation of the KVM installation. All procedures start from the OSD main screen.

To open the OSD main screen:

1. Tap the **Scroll Lock** key twice.

Note: [Scroll Lock] is the default OSD hotkey. You can optionally change the Hotkey to the Ctrl key (see *OSD ACTIVATION*, p. 85, for details).

The login screen appears:

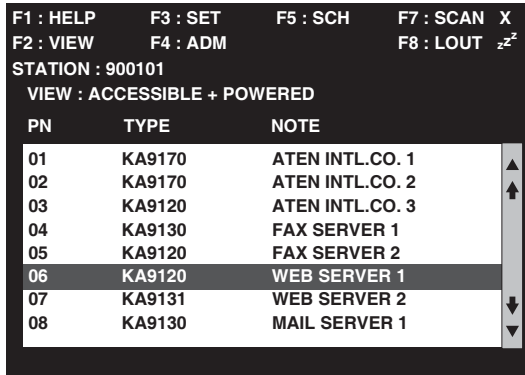


2. Key in a valid username and password, then press [Enter].

Note: The first time that you (or anyone else) log in to the KM0832 OSD, you must use the default super administrator account. The default username is *ADMIN* and the default password is also *ADMIN*. This account can

neither be deleted nor does it appear in the username list. The username cannot be changed; however, the password can be changed. We strongly recommend that you change the password immediately; otherwise, your KVM switch and all connected servers are vulnerable to access by unauthorized users. See *Configuring OSD User Settings*, page 62, to change the default password. After other user accounts have been added to the KM0832, it is no longer necessary to use the default super administrator account to log in.

After you log in, a screen similar to the one below appears:



The screenshot shows a terminal window with the following content:

```
F1 : HELP      F3 : SET      F5 : SCH      F7 : SCAN  X
F2 : VIEW      F4 : ADM      F8 : LOUT    zz²
STATION : 900101
VIEW : ACCESSIBLE + POWERED
PN      TYPE      NOTE
01      KA9170     ATEN INTL.CO. 1
02      KA9170     ATEN INTL.CO. 2
03      KA9120     ATEN INTL.CO. 3
04      KA9130     FAX SERVER 1
05      KA9120     FAX SERVER 2
06      KA9120     WEB SERVER 1
07      KA9131     WEB SERVER 2
08      KA9130     MAIL SERVER 1
```

- Note:**
1. The diagram depicts the super administrator's main screen. The user main screen does not show the **F4** function, since it is reserved for super administrators and administrators. Normal users cannot access it.
 2. The OSD always starts in List view, with the highlight bar at the same position it was in the last time it was closed.
 3. Only the ports that have been set accessible by the (super) administrator for the currently logged in user are visible (see *PORT ACCESS*, p. 90, for details).

OSD Main Screen Headings

Heading	Explanation
PN	This column lists the port numbers for all the KVM ports on the installation. The simplest method to access a particular computer is to move the highlight bar to it and press [Enter].
TYPE	The model number of the KVM adapter cable used to connect the computer to the port.
NOTE	If a port has been given a name (see <i>SET PC NOTE</i> , p. 92), its name appears in this column.

OSD Navigation

Use the following procedures to navigate through OSD menus:

- ◆ To dismiss the main screen, and deactivate the OSD, click the **X** at the upper right corner of the OSD window; or press [Esc].
- ◆ To logout, click **F8** at the top of the main screen, or press [F8].
- ◆ To move up or down through the list one line at a time, click the up and down triangle symbols (▲▼) or use the Up and Down Arrow keys. If there are more list entries than there is room for on the main screen, the screen will scroll.
- ◆ To move up or down through the list one screen at a time, click the up and down arrow symbols (↑↓), or use the [Page Up] and [Page Down] keys. If there are more list entries than there is room for on the main screen, the screen will scroll.
- ◆ To select a computer, double-click it; or, move the highlight bar to it, then press [Enter].
- ◆ After executing any action, you automatically go back to the menu one level above.

Port ID Numbering

Each KVM port on a KM0832 installation is assigned a unique port ID. You can access and control any computer on the installation by specifying the port ID of the port that it is connected to. Depending on where the computer is on the installation, its port ID will have either two or three parts.

Cascaded Protocol Interface Installations

The port ID for computers on protocol interface cascaded installations is made up of two or three parts, depending on the number of levels of cascaded switches:

- ◆ The *port number* on the root KM0832 station
- ◆ The *port number* on the second level KVM switch (if applicable)
- ◆ The *port number* on the third level KVM switch (if applicable).

For example, a computer attached to **Port 6** of a child KM0832 that is cascaded from **Port 15** of a child KM0832, which in turn is cascaded from **Port 8** of the root KM0832, would have a port ID of: **8-15-6**.

OSD Functions

OSD functions configure and control the OSD. Examples of what can be accomplished with the OSD include: rapidly switching to any port; auto scanning specifically selected ports; limiting the list of ports you wish to view; managing port names; user management, system administration, and making OSD setting adjustments.

To access an OSD function:

1. Click a function key field at the top of the main screen.
-or-
Press a function key on the keyboard.
2. In the submenus that appear, double-click on a choice.
-or-
Move the highlight bar to the choice, and then press [Enter].
3. Click or press [Esc] to return to the previous menu level.

To change a setting:

1. Double-click it.
-or-
Move the highlight bar to it, and then press [Enter].
2. After you select an item, a submenu with further choices appears. To make a selection, repeat Step 1 above. An icon appears before the selected choice.

Note: All setting changes are stored in temporary memory and remain in effect for the duration of your session. Changes only become permanent when you log out of the OSD (see p. 98). If you shut down the KM0832 without first logging out, your changes are discarded.

A complete description of the KM0832's OSD operations are given in the sections that follow.

F1: HELP

Click or press [F1] to access Help. It gives a brief description about each OSD function. It also displays information about the user, such as username, group membership, and the console the user is operating.

To return to the OSD main screen, click or press [Esc].

F2: VIEW

Many of the OSD functions only operate on the computers that are currently displayed (listed) on the main screen. This function lets you broaden or narrow the scope of which ports the OSD lists on the main screen. The submenu choices and their meanings are given in the table below.

Setting	Function
VIEW MODE	<p>Allows you to select which computers are listed in the OSD main screen. Choices are:</p> <p>PERSONAL—The OSD lists the ports that the user has set as personal. See <i>SET PERSONAL VIEW</i> (below).</p> <p>ACCESSIBLE—The OSD lists only those ports that the user is permitted to access. See <i>PORT ACCESS</i>, p. 90.</p> <p>ACCESSIBLE + POWERED—The OSD lists only those ports that the user is permitted to access and that have their attached computers powered on.</p> <p>The default is ACCESSIBLE + POWERED.</p>
SET PERSONAL VIEW	<p>If there are KM0832 switches cascaded from the ports of the master switch, you can create shortcuts to the computers of those lower level switches that will appear in the OSD list.</p> <p>To add a shortcut:</p> <ol style="list-style-type: none"> 1. Select ADD SHORTCUT. A box appears. 2. Enter the port ID number of the computer for which you wish to create a shortcut (e.g. 1-1-1). For a discuss on port ID numbering see p. 80. <p>To delete a shortcut:</p> <ol style="list-style-type: none"> 1. Select DELETE SHORTCUT. A list of shortcuts appears. 2. From the list, select the shortcut that you wish to delete. 3. Press [Y] to confirm; or, press [N] to cancel.

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Setting	Function
SET PORT ID	<p>A submenu appears with three selections:</p> <p>ID POSITION—Allows you to position where the port ID appears on the monitor. The default is the upper left corner, but you can have it appear anywhere on the screen.</p> <p>Use the mouse or the arrow keys plus [Page Up], [Page Down], [Home], [End], and [5] (on the numeric keypad with [Num Lock] off), to position the port ID display, then double-click or press [Enter] to lock the position and return to the View submenu.</p> <p>DISPLAY DURATION—Determines how long a port ID displays on the monitor after a port change has taken place. The choices are:</p> <p>USER DEFINED—which lets you select the amount of time (from 1–240 sec.); and</p> <p>ALWAYS ON—which displays the port ID at all times. If you select <i>User Defined</i>, key in the number of seconds, then press [Enter]. The default is 3 seconds. A setting of 0 (zero) disables this function.</p> <p>DISPLAY MODE—Selects how the port ID is displayed: the port number plus the port name (PORT NUMBER + PC NAME); the port number alone (PORT NUMBER); or the port name alone (PC NAME). The default is PORT NUMBER + PC NAME.</p>
SET SCAN	<p>SCAN INTERVAL—Determines how long the focus dwells on each port as it cycles through the selected ports in Auto Scan Mode (see <i>F7 SCAN</i>, p. 97). Key in a value from 1–240 seconds, then press [Enter]. The default is 5 seconds; a setting of 0 disables the Scan function.</p> <p>SCAN MODE—Selects which computers will be accessed under Auto Scan Mode (see <i>F7 SCAN</i>, p. 97). Choices are:</p> <p>PERSONAL—only those ports that the user has set as personal. See <i>SET PERSONAL VIEW</i> on p. 83.</p> <p>ACCESSIBLE—only those ports that the user is permitted to access. See <i>PORT ACCESS</i>, p. 90.</p> <p>ACCESSIBLE + POWERED—only those ports that the user is permitted to access and that have their attached computers powered on.</p> <p>The default is Accessible + Powered.</p>

F3: SET

This function allows the user to change the account password and set up a unique working environment. A separate profile for each user is stored by the OSD and is activated according to the *username* that is provided during login. The settings are explained in the following table:

Setting	Function
CHANGE PASSWORD	Enables the user to change the account password. Enter the old account password in the top field. Enter a new password in the middle field, and then reenter the password in the bottom field to confirm it. Press enter to save changes and return to the previous menu.
OSD ACTIVATION	Selects which Hotkey activates the OSD function: [Scroll Lock] [Scroll Lock] or [Ctrl] [Ctrl]. Since the Ctrl key combination may conflict with programs running on the computers, the default is the Scroll Lock combination.
SET LOGOUT TIMEOUT	If there is no input from the console for the amount of time set with this function, the operator is automatically logged out. A login is necessary before the console can be used again. This enables other operators to gain access to the computers when the original operator is no longer accessing them, but has forgotten to log out. To set the timeout value, key in a number from 1–180 minutes, then press [Enter]. If the number is 0 [zero], this function is disabled. The default is 0 (disabled).
SCREEN BLANKER	If there is no input from the console for the amount of time set with this function, the screen is blanked. Key in a value from 1–30 minutes, then press [Enter]. A setting of 0 disables this function. The default is 0 (disabled).
HOTKEY COMMAND MODE	Enables / Disables the Hotkey Command function in case a conflict with programs running on the computers occurs. The default is enabled. Choices are Y (Yes), or N (No).

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Setting	Function
SET BEEPER	When activated, the beeper sounds whenever a port is changed, when activating the Auto Scan function (see <i>F7 SCAN</i> , p. 97), or an invalid entry is made on an OSD menu. The default is Y (activated). Choices are Y (Yes), or N (No).
IDLE TIMEOUT	If there is no input from the console accessing a particular port for the amount of time set with this function, the port is released, allowing it to be accessed by the other consoles. To set the timeout value, key in a number from 0–255 seconds, then press [Enter]. If the number is 0 [zero], this function is disabled. The default is 5 seconds.
RESTORE USER DEFAULT	Selecting this restores the original factory default settings for <i>VIEW</i> and <i>SET</i> for the user profile. Choices are Y (Yes), or N (No). (This feature is not available from the KM0832 Administrator Utility.)

F4: ADM

F4 is a (super) administrator only function. It allows them to configure and control the overall operation of the OSD.

Note: When creating user accounts you must add each user to a group.

Therefore, we suggest that you create groups before users. If you do not wish to create groups you may add users to the default group account.

However, the default group account cannot be used to grant port access to group members. In this case, you must individually add users to the port(s).

ACCOUNT MANAGEMENT

Setting	Function
CREATE GROUP	Opens the NEW GROUP NAME field. Enter a name for the new group, and then press [Enter]. The group name may be up to 15 characters long, and can consist of any combination of letters and numbers (A–Z, 0–9).
MODIFY GROUP	Lists all groups. Select the group name that you wish to modify. Edit the group name, and then press [Enter].
DELETE GROUP	Lists all groups. Select the group name that you wish to delete. Press [Y] to confirm; or, press [N] to cancel.
GROUP ACCESS SETTING	<ol style="list-style-type: none"> 1. The group list appears. 2. Select the group for which you wish to modify port access rights. A list of all ports appears. 3. Select a port, and then set the Group Access Type: NONE—No port access; VIEW—group members can only view video from the port; FULL—group members can view video from the port and control the port. Note: If NONE is set, the port will not show up in the group members' port lists on the OSD main screen. 4. Press [Esc] to exit. The Group Access Type you selected is assigned to the group. 5. Repeat this procedure for all the ports in the list.

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CREATE USER ACCOUNT	<ol style="list-style-type: none"> 1. The group list appears. 2. From the list, select the group to which you wish to add the new user. 3. Enter a username and a password for the account; reenter the password to confirm it, and then press [Enter]. The username and password may be up to 15 characters long, and can consist of any combination of letters and numbers (A–Z, 0–9). The User Type list appears. 4. Select a User Type for the account: user (NORMAL USER), administrator (ADM), or (SUPER ADM). (Only super administrators can grant super administrator user rights to other users.)
MODIFY USER ACCOUNT	<p>Allows you to modify the user account settings. Choices are: RESET USER PASSWORD, CHANGE USER TYPE, and CHANGE USER GROUP.</p> <p>To change a user's account password:</p> <ol style="list-style-type: none"> 1. Select RESET USER PASSWORD. The user list appears. 2. From the list, select the user for whom you wish to change the password. 3. Enter the new password; reenter the new password to confirm it, and then press [Enter]. The password is changed. <p>To change a user's User Type:</p> <ol style="list-style-type: none"> 1. Select CHANGE USER TYPE. The user list appears. 2. From the list, select the user for whom you wish to change the User Type. 3. Select the new User Type, and then press [Esc] to exit. The User Type is changed. <p>To change a user's group membership:</p> <ol style="list-style-type: none"> 1. Select CHANGE USER GROUP. The user list appears. 2. From the list, select the user for whom you wish to change the group membership. The group list appears. 3. From the list, select the group to which you wish to add the user. The user is removed from the original group and added to the new group.
DELETE USER ACCOUNT	<p>Opens the user list. Select the user that you wish to delete. Press [Y] to confirm; or, press [N] to cancel.</p>

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Setting	Function
USER ACCESS SETTING	<ol style="list-style-type: none">1. The user list appears.2. Select the user for whom you wish to modify port access rights. A list of all ports appears.3. Select a port, and then set the User Access Type: NONE—no port access; VIEW—users can only view video from the port; FULL—users can view video from the port and control the port. Note: If NONE is set, the port will not show up in the user's port list on the OSD main screen.4. Press [Esc] to exit. The User Access Type you selected is assigned to the user.5. Repeat this procedure for all the ports in the list.

PORT MANAGEMENT

Setting	Function
PORT ACCESS	<p>This function allows the administrator to define group and user access to the computers on the installation on a port-by-port basis.</p> <p>Select a port from the list to manage user and group access to the port. A list appears with the following choices: ADD GROUP, SET GROUP ACCESS TYPE, DELETE ACCESS GROUP, ADD USER, SET USER ACCESS TYPE, and DELETE ACCESS USER.</p> <p>To grant port access to a group:</p> <ol style="list-style-type: none"> 1. Select ADD GROUP. The group list appears. 2. From the list, select the group to which you wish to grant access to the port. 3. Press [Y] to confirm; or, press [N] to cancel. <p>To set the Group Access Type:</p> <ol style="list-style-type: none"> 1. Select SET GROUP ACCESS TYPE. A list of all groups that have been added to the port appears. 2. From the list, select the group for which you wish to set the Group Access Type. 3. Set the Group Access Type: NONE—No port access; VIEW—group members can only view video from the port; FULL—group members can view video from the port and control the port. <p>Note: If NONE is set, the port will not show up in the group members' port lists on the OSD main screen.</p> <ol style="list-style-type: none"> 4. Press [Esc] to exit. The Group Access Type you selected is assigned to the group. <p>To revoke group access for a port:</p> <ol style="list-style-type: none"> 1. Select DELETE ACCESS GROUP. A list of all groups that have been added to the port appears. 2. From the list, select the group for which you wish to revoke access to the port. 3. Press [Y] to confirm; or, press [N] to cancel.

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Setting	Function
PORT ACCESS (cont.)	<p>To grant port access to a user:</p> <ol style="list-style-type: none"> 1. Select ADD USER. The user list appears. 2. From the list, select the user to whom you wish to grant access to the port. 3. Press [Y] to confirm; or, press [N] to cancel. <p>To set the User Access Type:</p> <ol style="list-style-type: none"> 1. Select SET USER ACCESS TYPE. A list of all users who have been added to the port appears. 2. From the list, select the user for whom you wish to set the User Access Type. 3. Set the User Access Type: NONE—no port access; VIEW—users can only view video from the port; FULL—users can view video from the port and control the port. <p>Note: If NONE is set, the port will not show up in the user's port list on the OSD main screen.</p> <ol style="list-style-type: none"> 4. Press [Esc] to exit. The User Access Type you selected is assigned to the user. <p>To revoke user access for a port:</p> <ol style="list-style-type: none"> 1. Select DELETE ACCESS USER. A list of all users that have been added to the port appears. 2. From the list, select the user for whom you wish to revoke access to the port. 3. Press [Y] to confirm; or, press [N] to cancel.

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Setting	Function
SET PC NOTE	<p>To help remember which computer is attached to a particular port, every port can be given a name. This function allows the administrator to create, modify, or delete port notes.</p> <p>To edit a port note:</p> <ol style="list-style-type: none"> 1. Click the port you want, or use the navigation keys to move the highlight bar to it, then press [Enter]. 2. Key in the new port note, or modify/delete the old one. The maximum number of characters allowed for the port note is 15. Legal characters include: <ul style="list-style-type: none"> ◆ All alpha characters: a–z; A–Z ◆ All numeric characters: 0–9 ◆ Spacebar <p>Case does not matter; the OSD displays the port note in all capitals no matter how they were keyed in.</p> 3. When you have finished editing, press [Enter]. The new name appears in the PORT NOTE field. To abort the change, press [Esc].
SET PORT LANGUAGE	<p>This function allows the administrator to define the keyboard language layout for each port. The default is U.S. ENGLISH.</p> <p>To set the port language:</p> <ol style="list-style-type: none"> 1. From the list, select the port for which you wish to set the computer's keyboard language layout. 2. Set the keyboard language layout: US ENGLISH, JAPANESE, or FRENCH. 3. Press [Esc] to exit. The keyboard language layout you selected is assigned to the port.
SET PORT OPERATING SYSTEM	<p>This function allows the administrator to define the operating platform for the computer connected to each port. The default is WINDOWS (PC compatible).</p> <p>To set the port operating system:</p> <ol style="list-style-type: none"> 1. From the list, select the port for which you wish to set the computer's operating platform. 2. Set the operating platform: WINDOWS, MAC, or SUN. 3. Press [Esc] to exit. The operating platform you selected is assigned to the port.

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Setting	Function
RESTORE PORT DEFAULT	This function revokes port access for users and groups, removes the station name and port notes, and restores original factory default settings for the Port Operating System and Port Language fields. See <i>Factory Default Settings</i> , page 108.

STATION MANAGEMENT

Setting	Function
CREATE STATION NOTE	This function allows administrators to assign a name to the KM0832 station, which helps to distinguish identical stations on a multiple station KVM installation.
DELETE STATION NOTE	This function allows administrators to delete a station note.

SYSTEM INFORMATION

Setting	Function
SYSTEM INFORMATION	This function differs from the <i>System Information</i> screen in the KM0832 Administrator Utility. It displays a list of all KM0832 modules, as well as connected console modules and KVM adapter cables. Important information about each device is shown in the list, such as the console or port number to which the device is attached, the device type, the original firmware version and the most recent firmware upgrade version.

SADM CONFIGURATION

Only the super administrator can view and control the functions under this menu.

Setting	Function
SET NETWORK	<p>This function allows administrators to configure the network settings for the KM0832 on the Local Area Network (LAN). A submenu appears with the following choices: HTTP PORT, HTTPS PORT, AUTOMATIC IP ADDRESS, and IP ADDRESS SETTING.</p> <p>To set the HTTP port:</p> <ol style="list-style-type: none"> 1. From the list, select HTTP PORT. 2. Key in the port number (typically port 80), and press [Enter]. <p>To set the HTTPS port:</p> <ol style="list-style-type: none"> 1. From the list, select HTTPS PORT. 2. Key in the port number (typically port 443), and press [Enter]. <p>To enable dynamic IP addressing with a DHCP server:</p> <ol style="list-style-type: none"> 1. From the list, select AUTOMATIC IP ADDRESS. 2. Press [Y] to enable; or, press [N] to disable. <p>Note: The default is enabled. If you disable this feature, then you should manually configure the IP settings.</p> <p>To manually configure the IP settings:</p> <ol style="list-style-type: none"> 1. From the list, select IP ADDRESS SETTING. A list appears with the following choices: IP ADDRESS, SUBNET MASK, GATEWAY, PRIMARY DNS SERVER, and ALTERNATE DNS SERVER. 2. Select each choice and enter the numerical address (dotted quad address), and then press [Enter]. <p>Note: These settings do not apply if you enable DHCP.</p>
SET CLOCK	<p>This function allows administrators to configure the date and time for the KM0832. A submenu appears with the following choices: SET DATE and SET TIME.</p> <p>To set the date and time:</p> <ol style="list-style-type: none"> 1. From the list, select SET DATE. In the field that appears, enter the date in YYYY-MM-DD format, and then press [Enter]. 2. From the list, select SET TIME. In the field that appears, enter the time in HH:MM:SS format, and then press [Enter].

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Setting	Function
BROADCAST	<p>Selecting BROADCAST invokes Broadcast Mode. When this function is in effect, commands sent from the console are broadcast to all available computers on the installation.</p> <p>This function is particularly useful for operations that need to be performed on multiple computers, such as performing a system wide shutdown, installing or upgrading software, etc.</p> <ul style="list-style-type: none">◆ While Broadcast Mode is in effect, a <i>speaker</i> symbol appears before the port ID display of the port that currently has the console focus.◆ While Broadcast Mode is in effect, the mouse will not function normally. You must exit Broadcast Mode in order to regain control of the mouse.◆ To exit Broadcast Mode, invoke the OSD (with the OSD Hotkey), then select BROADCAST to turn Broadcast Mode off.

F5: SCH

The *Search* function provides a convenient method to easily locate ports and cascaded stations by their port notes.

To search for a port:

1. From the OSD main screen, press or click [**F5**].
2. In the field that appears, enter the port note of the port for which you are searching. All port notes that match or contain the search term(s) appear in a list.

Note: You do not need to enter the entire port note; a partial port note is acceptable. For example, if you want to search for a port with port note **WIN 2K AS**, you only need enter a portion of the port note, i.e. **WIN**.

F7: SCAN

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

- ◆ The selection of computers to be included for Auto Scanning is made with the *SCAN MODE* setting under the **F2 SET** function (see *SET SCAN* on p. 84).
- ◆ The amount of time that each port displays for is set with the *SCAN INTERVAL* setting under the **F2 SET** function (see *SET SCAN* on p. 84). When you want to stop at a particular location, press the [Spacebar] or [Esc] to stop scanning and exit *Auto Scan Mode*.
- ◆ If the scanning stops on an empty port, or one where the computer is attached but is powered off, the monitor screen will be blank, and the mouse and keyboard will have no effect. Simply wait—after the *Scan Duration* time is up, the Scan function will switch to the next port.
- ◆ As each computer is accessed, an **S** appears in front of the port ID display to indicate that it is being accessed under *Auto Scan Mode*.
- ◆ While Auto Scan Mode is in effect, the console will not function normally. You must exit Auto Scan Mode in order to regain control of the console.
- ◆ While you are in Auto Scan Mode, you can pause the scanning in order to keep the focus on a particular computer either by pressing **P**, or with a left-click of the mouse. See *Invoking Auto Scan*, p. 102, for details.
- ◆ While you are in Auto Scan Mode, press [←] to switch to the previous computer in the list; press [→] to switch to the next computer in the list. After the amount of time set with the *SCAN INTERVAL* elapses, the Scan function will switch to the next port.

When you skip, you only skip to the previous or next available computer that is in the *Scan Mode* selection (see p. 84).

- ◆ To exit Auto Scan Mode, press the [Spacebar] or [Esc].

F8: LOUT

LOUT (Log Out) logs you out of OSD control of the computers, and blanks the console screen. This is different from simply pressing [Esc] to deactivate the OSD when you are at the main screen. With this function you must log in all over again to regain access to the OSD, whereas with [Esc], all you have to do to reenter the OSD is tap the OSD Hotkey.

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

Chapter 5

Hotkey Operation

Hotkey Port Control

Hotkey port control allows you to provide KVM focus to a particular computer directly from the keyboard.

Note: Hotkeys work best in single stage and basic cascaded or daisy chained installations. For installations that combine daisy chaining and cascading, it is simpler, more convenient, and more efficient to use the OSD.

The KM0832 provides the following Hotkey port control features:

- ◆ Selecting the active port
- ◆ Auto Scanning
- ◆ Skip Mode switching

Invoking Hotkey Mode

All Hotkey operations begin by invoking Hotkey Mode (HKM). Invoking HKM takes three steps:

1. Hold down the [Num Lock] key
2. Press the * key or the - (minus) key
3. Simultaneously release both keys

[Num Lock] + [*]

or:

[Num Lock] + [-]

When HKM is active:

- ◆ The Caps Lock, and Scroll Lock LEDs flash in succession to indicate so. They stop flashing and revert to normal status when you exit HKM.
- ◆ A command line appears at the bottom of the monitor screen. The command line prompt is the word *Hotkey*: in white text on a blue background. Text that you key in while in HKM displays here.
- ◆ Ordinary keyboard and mouse functions are suspended—only Hotkey compliant keystrokes and mouse clicks (described in the sections that follow), can be input.
- ◆ Pressing [Esc] or [Spacebar] exits HKM.

Selecting the Active Port

Each KVM port is assigned a port ID (see *Port ID Numbering*, p. 80). You can directly access any computer on the installation with a Hotkey combination that specifies the port ID of the KVM port that the computer is connected to. The steps involved are:

1. Invoke HKM (see p. 99).
2. Key in the port ID

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

3. Press [Enter]

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

Auto Scanning

Auto Scan switches among all the KVM ports that are accessible to the current operator at regular intervals (see *SCAN MODE* under *SET SCAN*, p. 84, for information regarding accessible ports). This function is convenient for automatically monitoring the activity of the computers on the installation.

Setting the Scan Interval:

The amount of time Auto Scan focuses on each port is set with the *SCAN INTERVAL* setting of the OSD **F2 SET** function (see *SET SCAN* on p. 84). You can change the scan interval before activating Hotkey Auto Scanning, if you wish, with the following Hotkey combination:

1. Invoke HKM (see p. 99).
2. Key in [T] [n]

Where [T] is the letter **T**, and [n] is a number from 1–255 that represents the number of seconds for the dwell time.

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

3. Press [Enter]

After you press [Enter], you automatically exit HKM, and are ready to invoke Auto Scanning.

Invoking Auto Scan:

To start Auto Scanning, key in the following Hotkey combination:

1. Invoke HKM (see p. 99).
2. Press [A].

After you press **A**, you automatically exit HKM, and enter Auto Scan Mode, and Auto Scanning begins.

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

Pausing and exiting are the two ways to stop scanning and keep the focus on a particular computer. If you intend to continue scanning after a brief stop, pausing is more convenient than exiting Auto Scan Mode completely.

This is because when you resume scanning after pausing, you start from where you left off. On the other hand, if you exit and then restart Auto Scan, you start over from the very first computer on the installation.

To resume Auto Scanning after you pause, press any key or left-click. Scanning continues from where it left off.

- ◆ While you are in Auto Scan Mode, press [←] to switch to the previous computer in the list; press [→] to switch to the next computer in the list. After the amount of time set with the *SCAN INTERVAL* elapses, the Scan function will switch to the next port. When you skip, you only skip to the previous or next available computer that is in the *Scan Mode* selection (see p. 84).
 - ◆ While Auto Scan Mode is in effect, ordinary keyboard and mouse functions are suspended—only Auto Scan Mode compliant keystrokes and mouse clicks can be input. You must exit Auto Scan Mode in order to regain normal control of the console.
3. To exit Auto Scan Mode press [Esc] or [Spacebar]. Auto Scanning stops when you exit Auto Scan Mode.

Hotkey Beeper Control

The beeper (see *SET BEEPER*, p. 86) can be toggled on and off by means of a Hotkey. To toggle the beeper, enter the following Hotkey combination:

1. Invoke HKM (see p. 99).
2. Press [B]

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

Hotkey Summary Table

[Num Lock] + [*] or [Num Lock] + [-]	[port ID] [Enter]	Switches access to the computer that corresponds to that port ID.
	[T] [n] [Enter]	Sets the Auto Scan interval to n seconds—where n is a number from 1–255.
	[A]	Invokes Auto Scan Mode. When Auto Scan Mode is in effect, [P] or left-click pauses Auto Scanning. When Auto Scanning is paused, pressing any key or another left-click resumes Auto Scanning.
	[←]	Skips from the current port to the first accessible port previous to it.
	[→]	Skips from the current port to the next accessible port.
	[B]	Toggles the beeper on or off.









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Chapter 6

Keyboard Emulation

Mac Keyboard








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

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

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

Sun Keyboard

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

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

Note: 1. When using key combinations, press and release the first key [Ctrl], then press and release the activation key.

2. If you need to go into OK Mode, which requires Stop + A, see *Troubleshooting*, page 114.

Appendix

Specifications

Function		KM0832
Computer Connections	Direct	32
	Max	8,000
Console Connections		8
Port Selection		OSD, Hotkeys
Connectors	Console Port	8 x RJ-45 female
	KVM Port	32 x RJ-45 female
	Daisy Chain	1 x HPDB-50 female (Black)
	Configuration	1 x RJ-45 female
	Maintenance	1 x RJ-45 female
	Power	1 x 3-prong AC Socket
Switches	Reset	1 x Semi-recessed Pushbutton
	Power	1 x Rocker
	F/W Upgrade Recovery	1 x Slide
	User Port 1	1 x Slide
LEDs	User Port (On Line)	8 (green)
	KVM Port (On Line/Selected)	32 dual-colored (green/red)
	Power	1 (blue)
I/P Rating		100–240V, 50/60Hz; 1A
Power Consumption		120V/19W; 230V/20W
Emulation	Keyboard/Mouse	PS/2; Sun; USB (PC, Sun, Mac); serial
Scan Interval		1–255 seconds
Video		1024x768@60Hz (300m max.); DDC2B
Environment	Operating Temperature	0–50° C
	Storage Temperature	-20–60° C
	Humidity	0–80% RH, non-condensing
Physical Properties	Housing	Metal
	Weight	4.9 kg
	Dimensions (L x W x H)	43.8 x 38 x 4.4 cm

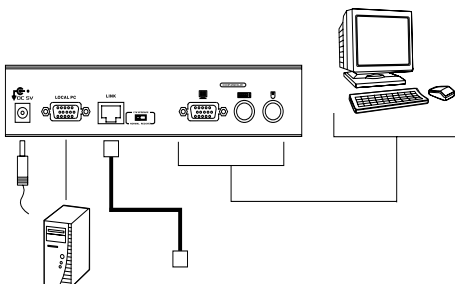
Factory Default Settings

The factory default settings are as follows:

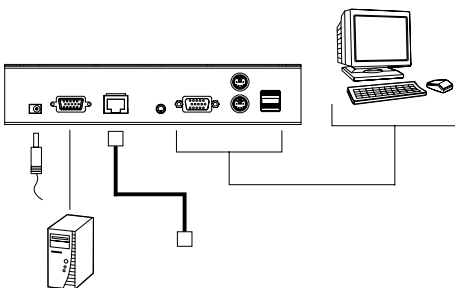
Setting	Default
View Mode	Accessible + Powered
Port ID Display Mode	The Port Number plus the Port Name
Port ID Display Position	Upper Left Corner
Port ID Display Duration	User Defined (3 seconds)
Scan Duration	5 seconds
Scan Mode	Accessible + Powered
OSD Hotkey	[Scroll Lock] [Scroll Lock]
Logout Timeout	0 (Disabled)
Screen Blanker	0 (Disabled)
Hotkey Command Mode	On (Enabled)
Beeper	On (Activated)
Idle Timeout	5 seconds
Port Note	None
Port Operating System	Windows (PC compatible)
Port Language	U.S. English
Port Access	None (super administrators and administrators have full access)
Webpage Session Timeout	3 minutes
IP Address	192.168.0.10
Subnet Mask	255.255.255.0
Default Gateway	192.168.0.254
HTTP Port	80
HTTPS Port	443
DHCP Enabled	No (Disabled)
SMTP Server Mail Notification	No (Disabled)
Date & Time	Synchronize with my computer
Daylight Saving Time	Enabled

Additional Installation Diagrams

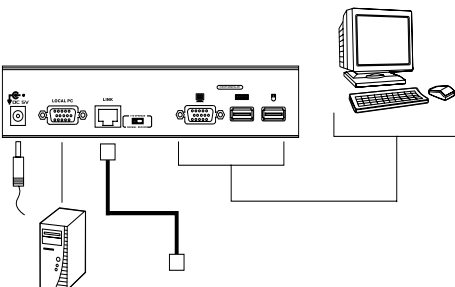
KA9222 PS/2 Console Module



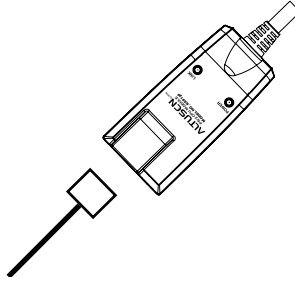
KA9233 PS/2-USB Console Module



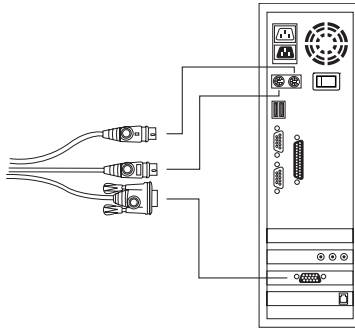
KA9272 USB Console Module



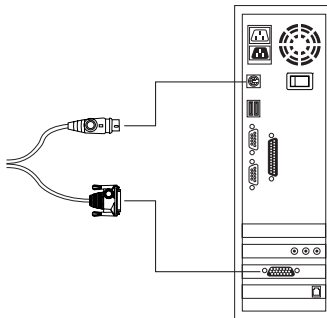
KM0832 to KVM Adapter Cable Connection



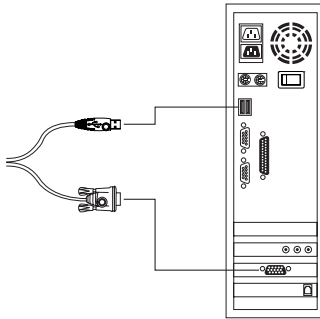
KA9120 PS/2 KVM Adapter Cable



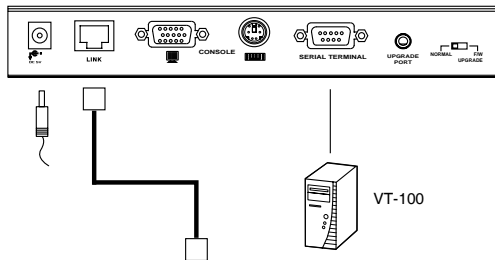
KA9130 Sun Legacy KVM Adapter Cable



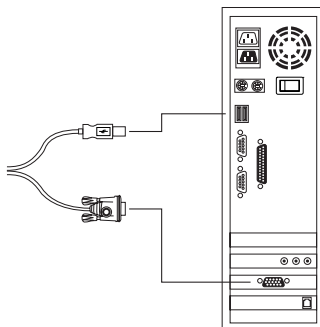
KA9131 Sun USB KVM Adapter Cable



KA9140 Serial KVM Adapter Cable



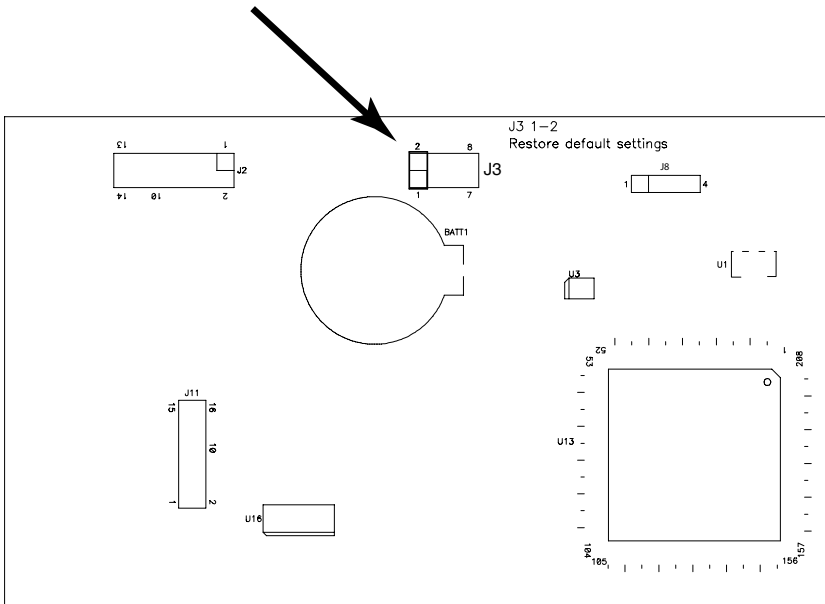
KA9170 USB KVM Adapter Cable



Restoring Original Factory Default Settings

You can restore the original factory default settings for the KM0832 Matrix KVM Switch. The original password for the default super administrator account is restored; all super administrator, administrator, user, and group accounts are removed from the system. Only the station name, Webpage Session Timeout setting, network settings, and date and time are retained. This procedure requires the use of a jumper cap.

1. Turn off the KM0832 and unplug the power cord.
2. Remove the cover of the KM0832.
3. Place a jumper cap over pins 1-2 of the J3 jumper on the mainboard.



4. Plug in the power cord and turn on the KM0832. The following directions appear on the console screen:

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

5. Turn off the KM0832 and unplug the power cord.

6. Remove the jumper cap from pins 1-2 of the J3 jumper.
7. Replace the cover on the switch. Plug in the power cord and turn on the KM0832.
8. You should now use the default username and password to login to the KM0832 Administrator Utility and OSD.

Troubleshooting

General

Problem	Solution
I can't use the KA9220 or KA9270 Console Modules with the KM0832.	The KM0832 does not support these two console modules. Instead, use the KA9222, KA9272, and KA9233 Console Modules with the KM0832.
The console monitor does not display and there is no response to keyboard and mouse input.	Verify that all cables are securely connected and in good condition, including those of the console modules, KVM adapter cables, and Cat 5 cable. Note: We strongly recommend that you use Cat 5 shielded twisted pair (STP) cable.
	Upgrade the firmware for the KVM adapter cables.
I can't use the KA9222 and KA9272 Console Modules to login to the KM0832.	<ol style="list-style-type: none"> 1. Verify that the username and password are correct. If after verifying that the username and password are correct you still cannot login, then follow Step 2. 2. Upgrade the firmware version of the console modules.
I can't use an Ethernet hub to connect the console modules and KVM adapter cables to the KM0832.	Although Cat 5 cable is used to connect the console modules and KVM adapter cables to the KM0832, it does not support the Ethernet protocol; thus, you cannot use an Ethernet hub to connect them.
The password for the default super administrator account needs to be reset.	See "Restoring Original Factory Default Settings" on page 112.
I upgrading the firmware, but some of the modules were not upgraded successfully.	See "Upgrade Failed" on page 67.
The firmware upgrade process was prematurely aborted and now some of the modules are inoperable.	See "Firmware Upgrade Recovery" on page 67.

Sun Systems

Problem	Solution
Video display problems with HDB-15 interface systems (e.g. Sun Blade 1000 servers).	<p>The display resolution should be set to 1024 x 768 @ 60Hz.</p> <p>Under Text Mode:</p> <ol style="list-style-type: none"> Go to OK mode and issue the following commands: <pre>setenv output-device screen:r1024x768x60 reset-all</pre> <p>Under XWindow:</p> <ol style="list-style-type: none"> Open a console and issue the following command: <pre>m64config -res 1024x768x60</pre> Log out. Log in.
Video display problems with 13W3 interface systems (e.g. Sun Ultra servers).*	<p>The display resolution should be set to 1024 x 768 @ 60Hz.</p> <p>Under Text Mode:</p> <ol style="list-style-type: none"> Go to OK mode and issue the following commands: <pre>setenv output-device screen:r1024x768x60 reset-all</pre> <p>Under XWindow:</p> <ol style="list-style-type: none"> Open a console and issue the following command: <pre>ffbconfig -res 1024x768x60</pre> Log out. Log in.

* These solutions work for most common Sun VGA cards. If these procedures fail to resolve the problem, consult the manual for the Sun VGA card.

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