



Touchboards

205 Westwood Ave, Long Branch, NJ 07740
Phone: 866-94 BOARDS (26273) / (732)-222-1511
Fax: (732)-222-7088 | E-mail: sales@touchboards.com

ATEN Altusen™

KM0032/KM0532/KM0932 0/5/9 Console 32-Port Matrix KVM Switch Quick Start Guide

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This product is RoHS compliant PAPE-1215-200G Printing Date: 06/2015



All information, documentation, firmware, software utilities, and specifications contained in this package are subject to change without prior notification by the manufacturer. Please visit our website http://www.aten.com/download/?cid=445 for the most up-to-date versions.

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United Kingdom: +44-9-4481-58923



1 Package Contents

- The KM0032 / KM0532 / KM0932 package consists of:
- 1 KM0032, KM0532, or KM0932
 - 2 Power Cords
 - 1 Daisy Chain Cable (KM0032 only)
 - 1 Mounting Kit
 - 1 Foot Pad Set (4 pcs.)
 - 1 User Instructions

Important Notice

Considering environmental protection, ATEN does not provide a fully printed user manual for this product. If the information contained in the Quick Start Guide is not enough for you to configure and operate your product, please visit our website www.aten.com, and download the full user manual.

Suggestion:

Shielded twisted pair (STP) Cat5 cables must be used with the unit to ensure compliance with FCC & CE standards.

2-1 Requirements

Console

The following hardware components are required for each KVM console:

- A VGA, SVGA, or multisync monitor capable of displaying the highest resolution provided by any computer on the installation
- Keyboard and mouse (PS/2 or USB)
- Console modules are required to connect KVM consoles to the KM0532 / KM0932. They provide flexibility for your installation by allowing PS/2 and USB interfaces to be mixed and matched at the KVM 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-USB Console Module	KA7230
Virtual Media PS/2-USB Console Module	KA7240

Computers

The following hardware components are required for each computer that connects to the switch:

- 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)

Cables

KVM Adapter Cables

KVM adapter cables connect multiplatform computers (PS/2, USB, Sun, Mac, and serial) and certain cascaded KVM switches to the KM0032 / KM0532 / KM0932. The KVM adapter cables currently available are listed in the table below. Contact your dealer for details.

Function	Model Number
For PS/2 computers	KA7120
For Sun legacy computers	KA7130
For serial devices	KA7140, KA9140
For USB computers (including Sun and Mac)	KA7170
For USB computers - Virtual Media and Audio support	KA7176, KA7178
For USB computers - Virtual Media and Smart Card Reader support	KA7177, KA7166, KA7168, KA7169

Connecting Cables

Other cables that are used to connect up the KM0032 / KM0532 / KM0932 installation include the following:

Function	Type
Connecting Console Modules or KVM Adapter Cable to the switch	Cat 5 Ethernet cable
Daisy Chaining switches	LIN5-68H1-H11G (45 cm)

2-2 Requirements

Operating Systems

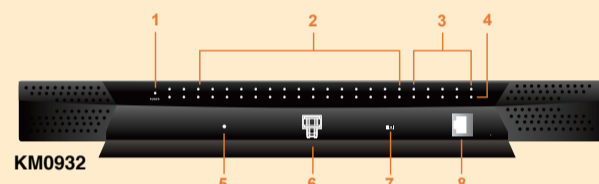
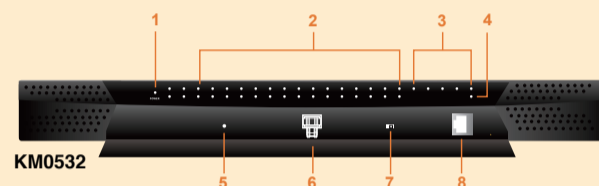
Supported operating systems are shown in the table, below:

	OS	Version
Windows	RedHat	7.1 and higher
	Fedora	Core 2 and higher
	SuSE	9.0 and higher
Linux	Mandriva (Mandrake)	9.0 and higher
	AIX	4.3 and higher
	FreeBSD	4.2 and higher
UNIX	Sun	Solaris 8 and higher
	Novell Netware	5.0 and higher
Mac		OS 9 and higher

3 Hardware Review (Front View)

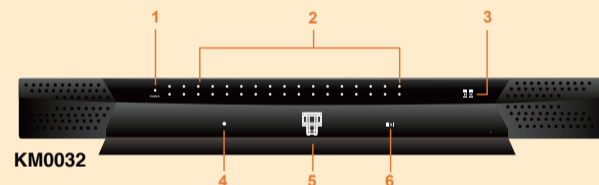
KM0532/KM0932

1. Power LED
2. KVM Port LEDs
3. Console (User) Port LEDs
4. LAN LED
5. Reset Switch
6. Cover Latch
7. Firmware Upgrade Recovery Switch
8. Console (User) Port



KM0032

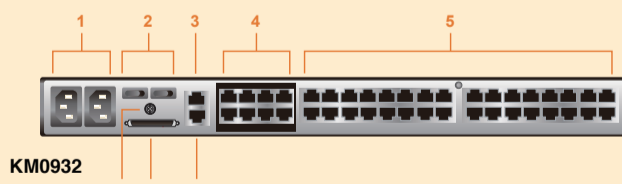
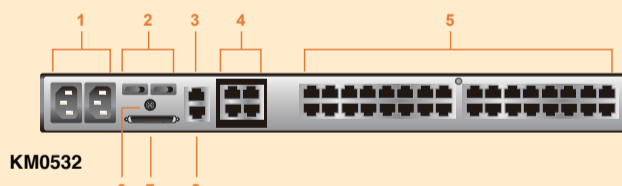
1. Power LED
2. Port LEDs
3. Station ID LED
4. Reset Switch
5. Cover Latch
6. Firmware Upgrade Recovery Switch



4 Hardware Review (Rear View)

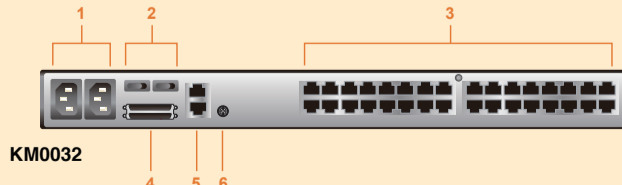
KM0532/KM0932

1. Power Sockets
2. Power Switches
3. PON Port
4. Console Ports
5. KVM Ports
6. Grounding Terminal
7. CHAIN OUT Port
8. LAN Port



KM0032

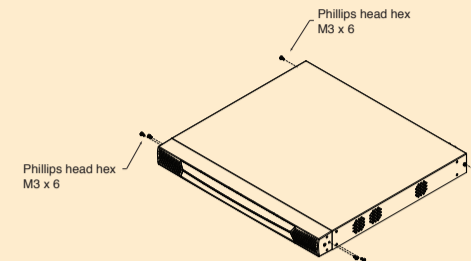
1. Power Sockets
2. Power Switches
3. KVM Ports
4. Daisy Chain Ports
5. LAN Port
6. Grounding Terminal



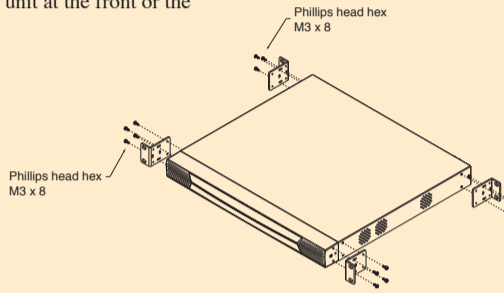
5-1 Rack Mounting

The KM0032/KM0532/KM0932 can be mounted in a 19" (1U) rack. The mounting brackets can screw into either the front or the back of the unit so that it can attach to the front or the back of the rack.

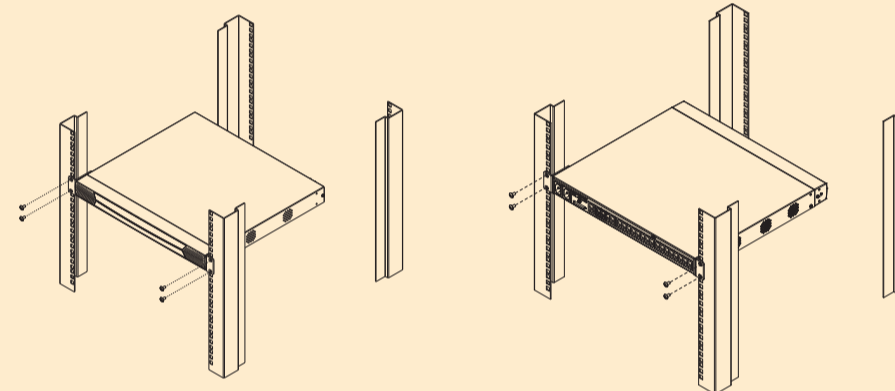
1. Remove the two screws at the front or the rear.



2. Screw the two mounting brackets into the sides of the unit at the front or the rear.

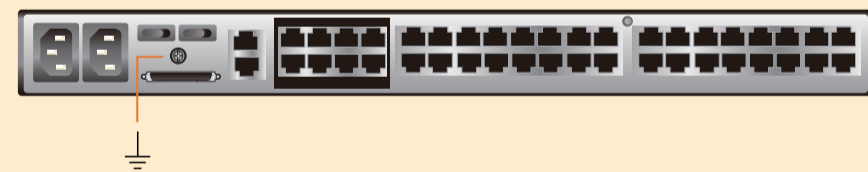


3. Slide the unit into the front or rear of the rack and secure it to the rack.



5-2 Grounding

To prevent damage to your installation it is important that all devices are properly grounded. Use a grounding wire to ground the KM0032 / KM0532 / KM0932 by connecting one end of the wire to the switch's grounding terminal, and the other end of the wire to a suitable grounded object.



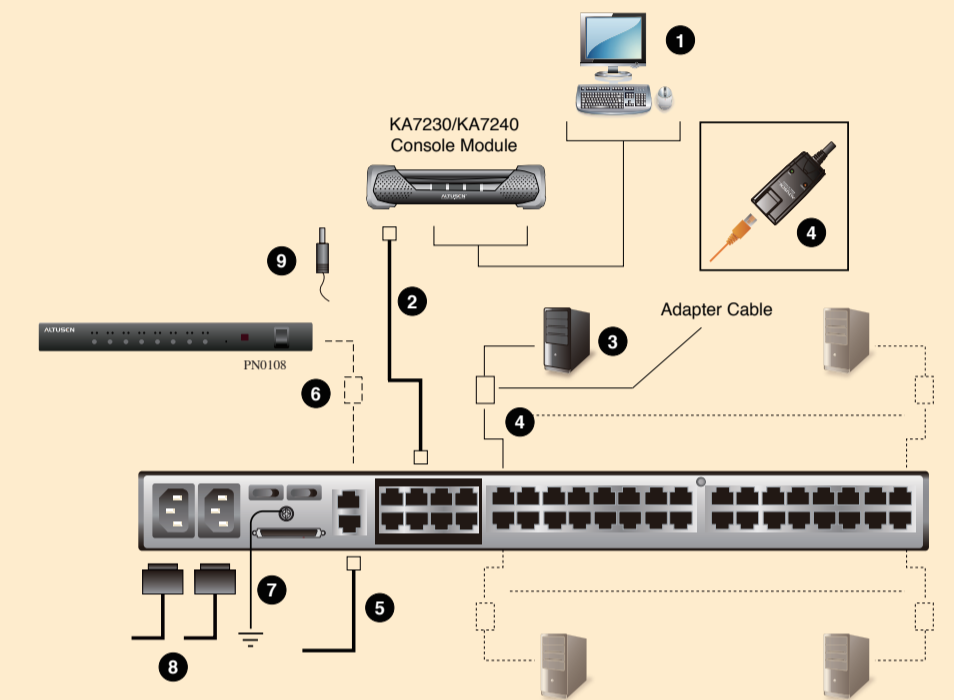
5-3 Single Level Installation

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

1. Connect the KVM console. Plug your keyboard, mouse, and monitor into their respective ports on the console module. Each console port is marked with an identifying icon
2. Connect the console module to the KM0532 / KM0932. Use Cat 5e/6 cable to connect the LINE IN 1 or LINE IN 2 port of the console module to one of the Console (User) ports on the KM0532 / KM0932's rear panel. (Repeat steps 1 and 2 for all KVM consoles that you wish to connect. Up to 5 (KM0532), or 9 (KM0932) KVM consoles may be connected in this fashion (1 port on the front panel, plus 4 or 8 ports on the rear panel).
Note: The distance between any console module and any KVM adapter cable must not exceed 300 m (1000').

5-3 Single Level Installation

3. Connect the KVM adapter cable to the computer. Using a KVM adapter cable that is appropriate for the computer you are installing, plug the adapter cable's connectors into their respective ports on the computer
4. Connect the KVM adapter cable to the KM0532 / KM0932. Use Cat 5e/6 cable to connect the KVM adapter cable to any available KVM port on the KM0532 / KM0932. (Repeat steps 3 and 4 for all computers that you wish to connect. Up to 32 computers may be connected in this fashion.)
5. Plug a cable from the LAN or WAN into the KM0532 or KM0932's LAN port.
6. Connect a PON unit (Optional) Use Cat 5e/6 cable to connect the KM0532 or KM0932's PON port to an SA0142 Adapter. Connect the Adapter to the PON IN port of a PN0108 Power Over the Net™ unit.
7. Ground the switch. Use the grounding wire supplied with this package to ground the unit by connecting one end of the wire to the grounding terminal, and the other end of the wire to a suitable grounded object.
Note: Do not omit this step. Proper grounding helps to prevent damage to the unit from surges or static electricity.
8. Plug the power cords supplied with this package into the KM0532 / KM0932's Power Socket, and then into an AC power source. Turn on the power to the KM0532 / KM0932.
9. Connect the console module's power adapter to the console module and to an AC power source.
10. Turn on the power to the computers.



5-4 Cascading

KM0532 and KM0932 switches support a 3 level cascade for KM0532 / KM0932 units. They support a 1 level cascade for other compatible model KVM switches. In other words, slave switches cannot be cascaded from non-KM0532 / KM0932 switches

Cascading KM0532 / KM0932 Switches

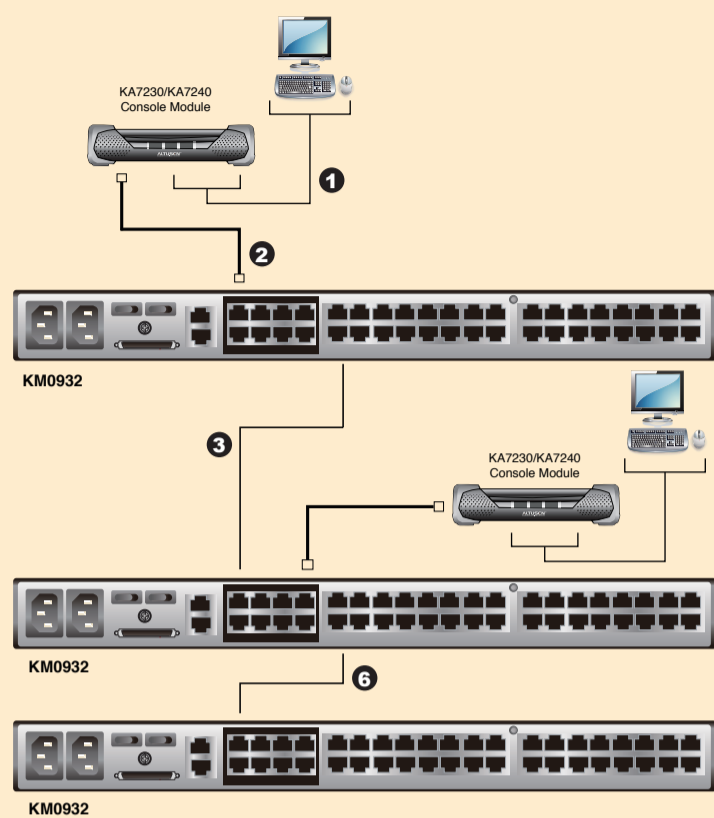
Note: The firmware version of all cascaded KM0532 / KM0932s should match the firmware version of the first level KM0532 / KM0932.

To cascade KM0532 / KM0932 switches refer to the installation diagram and do the following:

1. Connect the KVM console to the console module.
Note: The distance between any console module and any KVM adapter cable, or between the first level and final level KVM switch, may not exceed 300 m (1000').
2. Connect the console module to the KM0532 / KM0932.
Note: The distance between any console module and any KVM adapter cable must not exceed 300 m (1000').
3. Use Cat 5e/6 cable to connect any KVM port on the parent switch to any of the Console ports on the child switch.
Note: 1. The number of KVM consoles connected to the first level switch that can simultaneously access the cascaded switch is limited by the number of Console port connections between the parent and child switches.
2. The distance between any console module and any KVM adapter cable must not exceed 300 m (1000').
4. Repeat step 3 for each second level KVM switch that you wish to cascade.
5. Follow the instructions given for single level installation to connect computers, power cords, etc..
Note: It is not necessary to connect cascaded switches to the network. Remote (over the network) administration of cascaded switches are managed through the of the first level switch.
6. To cascade third level KVM switches, follow the instructions in steps 3, 4, and 5 when cascading them from the second level KVM switches.
7. Power on the first level KM0532 / KM0932.
8. Wait one minute, and then power on each second level KM0532 / KM0932.
9. Wait one minute, and then power on each third level KM0532 / KM0932.
10. Plug the power adapters supplied with the console modules into an appropriate AC power source, and then plug the power adapter cables into the power jacks on the rear of the console modules.
11. Turn on the power to all the computers.

5-4 Cascading

Cascaded KM0532 / KM0932 Installation Diagram



5-5 Daisy Chaining

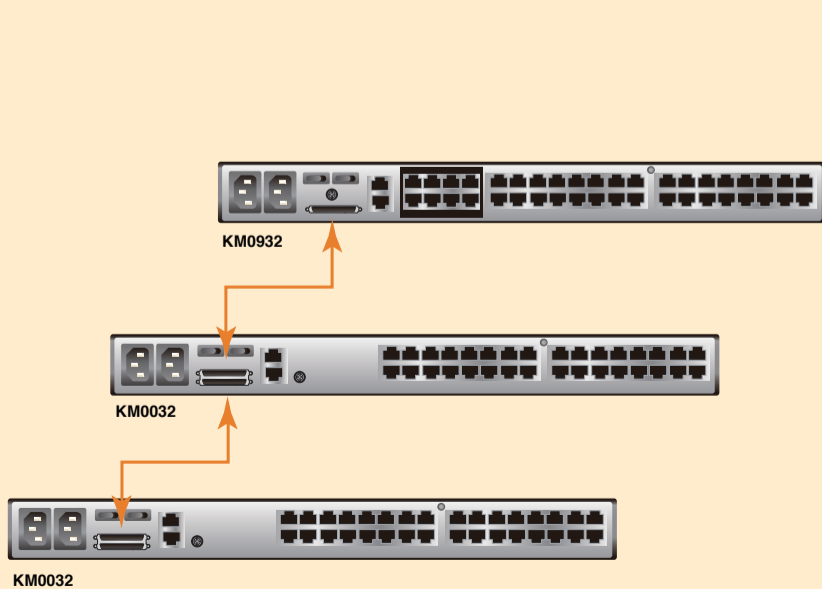
Up to 7 KM0032 Expansion KVM Switches can be daisy chained from the first level KM0532 / KM0932.

The KM0932 is capable of supporting nine independent KVM consoles, while the KM0532 is capable of supporting 5 independent KVM consoles. In a complete daisy chained installation, the KVM consoles that belong to the KM0532 / KM0932 can access and control all of the computers on the installation.

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

- Use a daisy chain cable set to connect the CHAIN OUT port of the parent KM0532 / KM0932 to the CHAIN IN port of the first KM0032.
 - Note:** 1. The maximum distance between any two switches cannot exceed 10 m.
 - 2. The maximum distance between the KM0532 / KM0932 and the last KM0032 in the chain cannot exceed 50 m.
- Follow the instructions given for single level installation to connect computers, LAN, power cords, etc.
- For any other KM0032 switches you want to add to the chain, use a daisy chain to connect the Chain Out port of the parent switch to the Chain In port of the child switch.
- Power on the installation according to the following procedure:
 - Power on the first level (KM0532 or KM0932) switch.
 - Power on each switch in the chain in turn (second station, then third station, etc.). In each case, wait for the station position to be ascertained and displayed on the Station ID LED before powering on the next station. (The Station ID for the first KM0032 is 01, the Station ID for the second level KM0032 is 02, etc.)
 - After all the KVM switches are powered on, power on the computers.

Daisy chained Installation Diagram

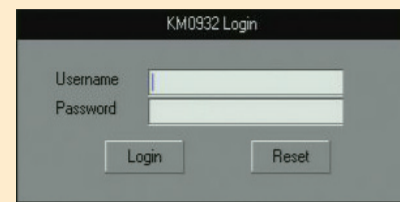


6 Administrator Setup

First Time Setup

Once the KM0032 / KM0532 / KM0932 installation has been cabled up, the Super Administrator needs to set the system up for user operation. The most convenient way to do this for the first time is from one of the consoles.

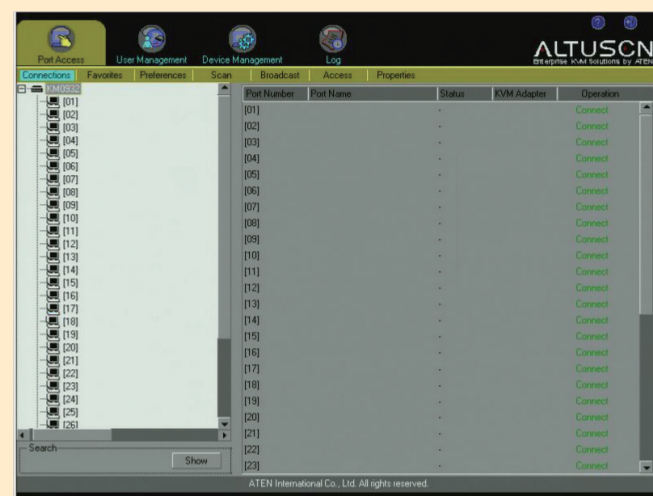
Note: For remote methods of setting up the network, see *IP Address Determination*. After the console has been connected up, and the KM0032 / KM0532 / KM0932 turned on, a login prompt appears on the console monitor:



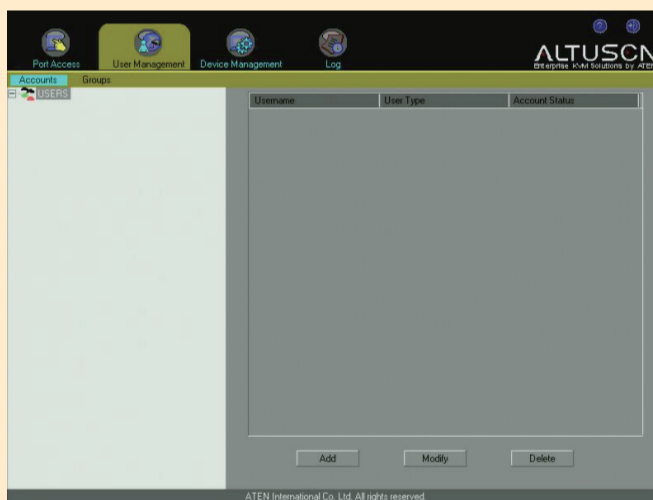
After the console has been connected up, and the KM0032 / KM0532 / KM0932 turned on, a login prompt appears on the console monitor:

Since this is the first time you are logging in, key in the default Username: **ADMINISTRATOR**; and the default Password: **password**.
Note: For security purposes, you should change the password (Port Access → Preferences). The default Administrator user name can not be changed.

After you successfully log in, the Console's GUI appears:



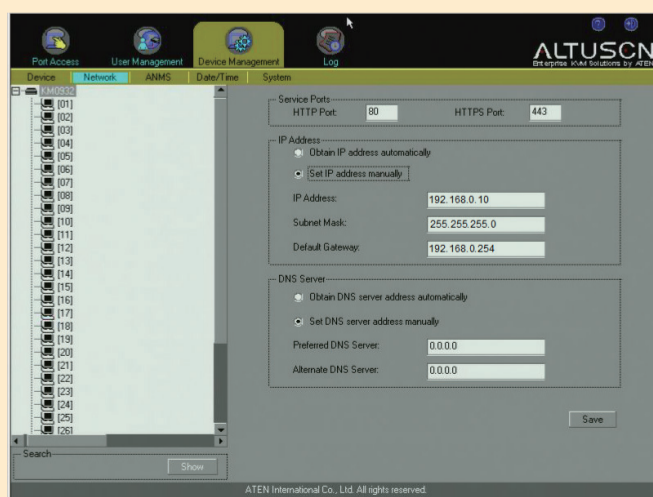
First select the User Management tab, then click **Add** at the bottom of the main panel.



Network Configuration

To set up the network, do the following:

- Click the **Device Management** tab.
- Select **Network** on the menu bar. A screen similar to the one below appears:



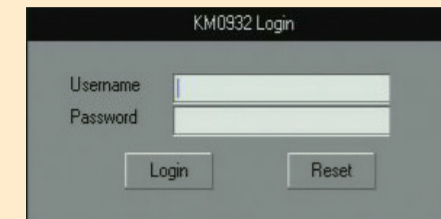
- For dynamic IP address assignment, select Obtain an IP address automatically.
- To specify a fixed IP address, select Set IP address manually, and fill in the IP address.
- For automatic DNS Server address assignment, select Obtain DNS Server address automatically.
- To specify the DNS Server address manually, select Use the following DNS Server, and fill in the addresses for the Primary and Alternate DNS servers.

7 Logging In

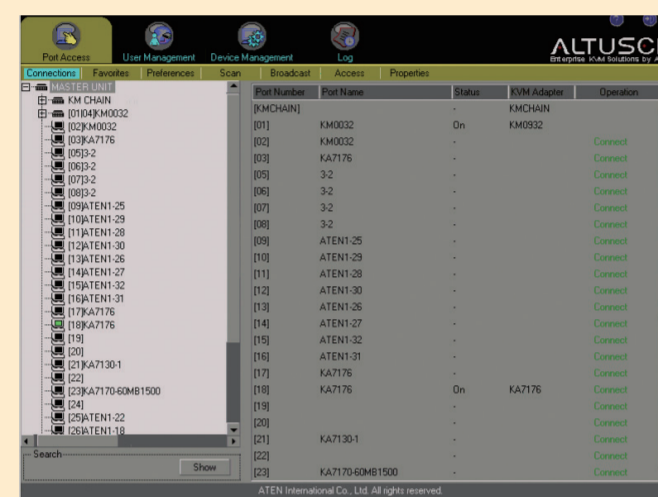
The KM0532 / KM0932 switch can be accessed from a local console or an internet browser. Browser access is provided for convenience in performing administrative tasks from a remote location. Port switching and port operation procedures can only be performed from a console.

Console Login

When a console is connected to a powered on KM0532 / KM0932 and there is no user logged in, the KM0532 / KM0932 login screen appears on the display



Simply key in your Username and Password, then click Login to bring up the Console GUI.

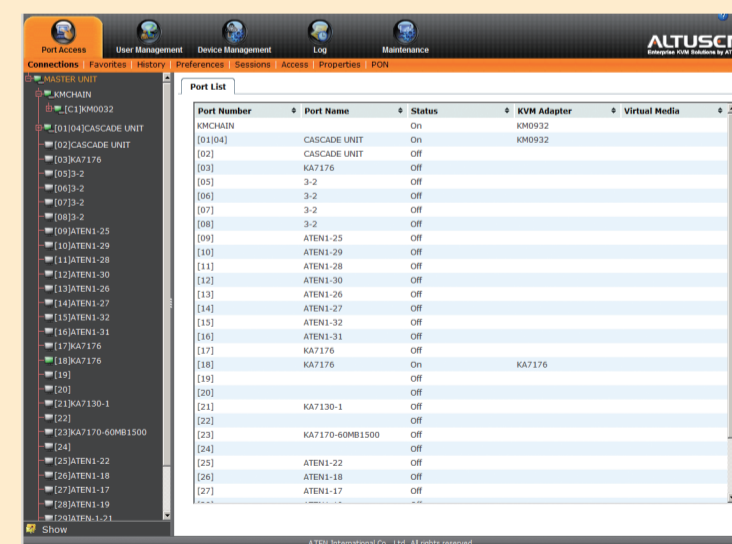


Browser Login

The KM0032 / KM0532 / KM0932 can be accessed via an Internet browser from any platform
Note: This can be used for remote configuration purposes. Port access can only be performed from a Console login.

To access the switch, do the following:

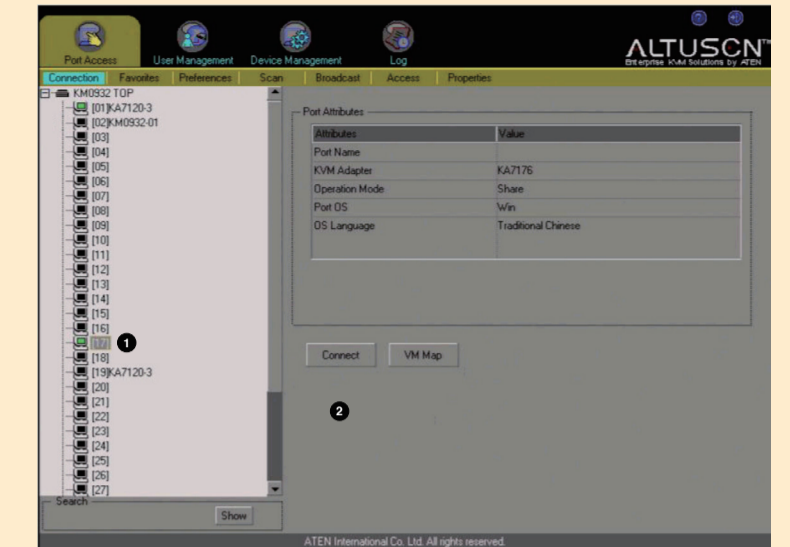
- Open the browser and specify the IP address of the switch you want to access in the browser's location bar.
- When a Security Alert dialog box appears, accept the certificate – it can be trusted. If other alerts appear, accept them as well. Once you accept the certificate(s), the login page appears.
- Provide your username and password (set by the administrator), then click Login to bring up the Browser UI Main Page.



8 Operation

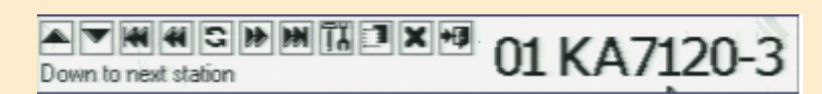
After you have successfully logged in into the Matrix KVM Switch, you can access the server connected to a port by doing the following:

- Double clicking on the port's icon in the Sidebar.
- Or
- Selecting the port in the Sidebar tree and clicking **Connect** in the main panel.



Port Operation

The UI provides a toolbar to help you control the KM0032 / KM0532 / KM0932 from within the captured port. To bring up the toolbar, tap the Toolbar Hotkey (Scroll Lock), twice. The toolbar appears at the upper left corner of the screen.



- Information about the functions that the Toolbar items perform appears when you move the mouse over them.
- When the toolbar displays, mouse input is confined to the toolbar area and keyboard input has no effect on the computer connected to the port. To carry out operations on the computer, close the toolbar by clicking the **X** on it; or, recall the UI and select the port again.

9 Specifications

Function		KM0032	KM0532	KM0932
Computer Connections	Direct		32	
	Max		8,000	
Console Connections		-	5	9
Port Selection		Via Daisy Chain		
Connectors	Console Port	-	5 x RJ-45 Female	9 x RJ-45 Female
	KVM Port	-	32 x RJ-45 Female	
	Daisy chain	1 x HPDDB-50 Female (Black)	1 x VHDCI 68 Female (Black)	
	LAN	-	1 x RJ-45 Female	
Switches	PON	-	1 x RJ-45 Female (Black)	
	Power	1 x 3-prong AC Socket		
LEDs	Reset	1 x Semi-recessed Pushbutton		
	Power		1 x Rocker	
I/P Rating	F/W Upgrade	1 x Slide		
	Console Port (On Line)	-	5 (Green)	9 (Green)
Power Consumption	KVM Port (On Line / Selected)	32 Dual-colored (Green / Orange or Red)		
	Power	1 (Blue)		
I/P Rating		100-240V AC, 50/60 Hz, 1A		
Power Consumption		120V/50W; 240V/51W	120V/45W; 240V/46W	120V/50W; 240V/51W
Emulation	Keyboard/Mouse	PS/2; USB; Serial		
Scan Interval		1-240 Seconds		
Video		1280x1024@60Hz max. 300m; DDC2B		
Environment	Operating Temp.	0-50°C		
	Storage Temp.	-20-60°C		
Physical Properties	Humidity	0-80% RH, Non-condensing		
	Housing	Metal		
Weight		6.06 kg	6.07 kg	6.08 kg
	Dimensions (L x W x H)	43.36 x 41.09 x 4.40 cm		