

# ALTUSCN™

Enterprise Solutions by ATEN

## KN2116A/KN2132/KN4116/KN4132 KVM Over the NET™ Quick Start Guide

© Copyright 2012 ATEN™ International Co., Ltd. www.aten.com  
 Altusen and the Altusen logo are trademarks of ATEN International Co., Ltd.  
 All rights reserved. All other trademarks are the property of their respective owners.  
 This product is RoHS compliant PAPE-1214-M01G Printing Date: 01/2012

**Online Registration**  
 International:  
 • http://support.aten.com  
 North America:  
 • http://www.aten-usa.com/product\_registration

**Technical Phone Support**

International:  
 • 886-2-8692-6959  
 China:  
 • 86-10-5255-0110  
 Japan:  
 • 81-3-5615-5811  
 Korea:  
 • 82-2-467-6789  
 North America:  
 • 1-888-999-ATEN Ext: 4988  
 United Kingdom:  
 • 44-8-4481-58923



**Patent No.**  
 TW 1273415 US 7142721 CN ZL 200910001638.6  
 TW 199673 US 7716404  
 US 7300091 CN ZL 02129894.7

All information, documentation, and specifications contained in this media are subject to change without prior notification by the manufacturer. Please visit our website to find the most up to date version.

## 1 Package Contents

- 1 KN2116A, KN2132, KN4116 or KN4132 KVM Over the NET™ KVM Switch
- 2 SA0142 Serial Adapter (RJ45-F to DB9-M; DTE to DCE)
- 1 Power Cord
- 1 Rack Mount Kit
- 1 Foot Pad Set (4 pcs.)
- 1 User Instructions

## 2-1 Requirements

### Remote User Computers

Remote user computers (also referred to as client computers) are the ones the users log into the switch with from remote locations over the internet. The following equipment must be installed on these computers:

- For best results we recommend that the computers used to access the switch have at least a P III 1 GHz processor, with their screen resolution set to 1024 x 768.
- Browsers must support 128 bit SSL encryption.
- For best results, a network transfer speed of at least 512kbps is recommended.
- For the Windows Client AP, DirectX 8 must be present, and at least 90MB of memory must be available after installation.
- For the Java Client AP, the latest version of Sun's Java Runtime Environment (JRE) must be installed, and at least 145MB of memory must be available after installation.
- For the browser-based WinClient ActiveX Viewer, DirectX 8 must be present, and at least 150MB of memory must be available after installation.
- For the browser-based Java Applet Viewer the latest version of Sun's Java Runtime Environment (JRE) must be installed, and at least 205MB of memory must be available after installation.
- For the Log Server, you must have the Microsoft Jet OLEDB 4.0 or higher driver installed.

### Servers

Servers are the computers connected to the switch via KVM Adapter Cables. The following equipment must be installed on these servers:

- A VGA, SVGA or Multisync port
- For USB KVM Adapter Cable Connections: a Type A USB port and USB host controller
- For PS/2 KVM Adapter Cable Connections: 6-pin mini-DIN keyboard and mouse ports

## 2-2 Requirements

### Video

Only the following non-interlaced video signals are supported:

Resolution	Refresh Rates	Resolution	Refresh Rates
640 x 480	60, 70, 72, 75, 85	1152 x 864	60, 70, 75, 85
720 x 400	70, 75	1152 x 900	66, 76
800 x 600	56, 60, 70, 72, 75, 85	1280 x 1024	60, 70, 75, 85
1024 x 768	60, 70, 75, 85	1600 x 1200	60

### KVM Adapter Cables

- Cat 5e / 6 cable is required to connect the KN2116A/KN2132/KN4116/KN4132 to the one of the KVM Adapter Cables.
- The following KVM Adapter Cables are required for use with the KN2116A/KN2132/KN4116/KN4132

Function	Module
Connect to devices with PS/2 ports	KA9120/KA7120
Connect to devices with USB ports	KA9170/KA7170
Connect to Sun Legacy Computers	KA9130/KA7130
Connect to serial based devices	KA9140 KA7140

### Operating Systems

- Supported operating systems for remote user computers that log into the KN2116A / KN2132 / KN4116 / KN4132 include Windows 2000 and higher, and those capable of running Sun's Java Runtime Environment (JRE) 6, Update 3, or higher (Linux, Mac, Sun, etc.).
- Supported operating systems for servers that connected to the KN2116A / KN2132 / KN4116 / KN4132 are shown in the table, below:

OS	Version	
Windows	2000 and higher	
Linux	RedHat	7.1 and higher
	Fedora	Core 2 and higher
	SuSE	9.0 and higher
	Mandriva (Mandrake)	9.0 and higher
UNIX	AIX	4.3 and higher
	FreeBSD	4.2 and higher
	Sun	Solaris 8 and higher
Novell	Netware	5.0 and higher
Mac	OS 9 and higher*	
DOS	6.2 and higher	

### Browsers

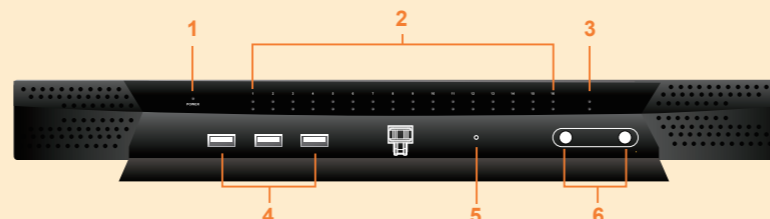
Supported browsers for users that log into the KN2116A / KN2132 / KN4116 / KN4132 include the following:

Browser	Version	
Internet Explorer	6 and higher	
Chrome	8.0 and higher	
Firefox	Windows	3.5 and higher
	Linux	3.0 and higher
Safari	Windows	4.0 and higher
	Mac	3.1 and higher
Opera	10.0 and higher	
Mozilla	Windows	1.7 and higher
	SUN	1.7 and higher
Netscape	9.0 and higher	

\* If Safari freezes when using that Snapshot feature you must upgrade to Mac OS 10.4.11 and Safari 3.04

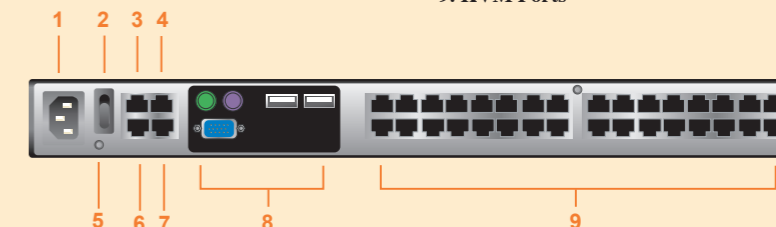
## 3 Hardware Review (Front View)

- 1. Power LED
- 2. Port LEDs
- 3. LAN LEDs
- 4. USB Ports
- 5. Reset Switch
- 6. Port Switching Buttons



## 4 Hardware Review (Rear View)

- 1. Power Socket
- 2. Power Switch
- 3. Secondary LAN Port
- 4. PON Port
- 5. Grounding Terminal
- 6. Primary LAN Port
- 7. Modem Port
- 8. Local Console Port(s)
- 9. KVM Ports



**Note:** The figure above shows the rear panel of a KN2132 / KN4132 with two blocks of 16 KVM ports (32 ports in total). The KN2116A / KN4116 differs in that it only has a single block of KVM ports (16 ports in total).

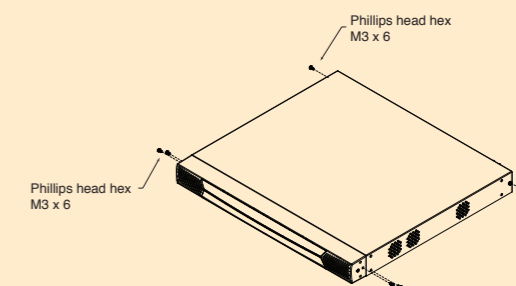
## 5 Hardware Installation 1

### Rack Mounting

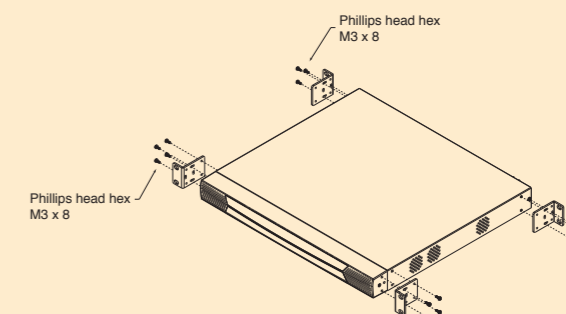
The KN2116A / KN2132 / KN4116 / KN4132 can be mounted in a 19" (1U) rack. The mounting brackets can screw into either the front or the back of the unit so that it can attach to the front or the back of the rack.

To mount the unit at the front of the rack, do the following:

1. Remove the two screws at the front or the rear, as shown in the diagram below:



2. Screw the mounting brackets into the sides of the unit at the front or the rear, as shown in the diagram below:



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

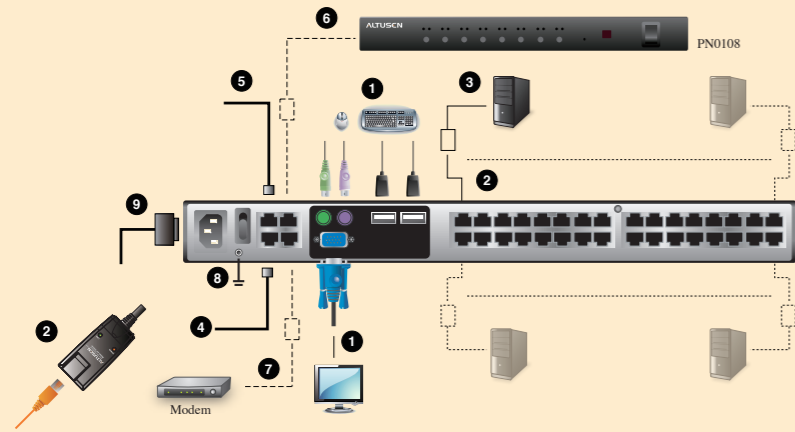
# 6

## Hardware Installation 2

Refer to the connection diagrams for connection examples as you do the following:

1. Plug your Local Console's keyboard, monitor, and mouse into the unit's Console Ports. Each port is color coded and marked with an appropriate icon  
**Note:** 1. You can use any combination of keyboard and mouse connections. For example, you can use a PS/2 keyboard with a USB mouse.  
 2. USB keyboards and mice can plug into the USB ports on the front panel, as well as into the ports in the console port section.  
 3. The KN2116A / KN2132 / KN4116 / KN4132 does not support distances that exceed 20m between itself and the local monitor.
2. Use Cat. 5e/6 cable to connect any available KVM port to a KVM Adapter Cable that is appropriate for the server you are installing.  
**Note:** The distance between the KN2116A / KN2132 / KN4116 / KN4132 and the KVM Adapter Cable must not exceed 40m.
3. Plug the connectors on the KVM Adapter Cable into the appropriate ports of the server you are installing.
4. Plug a cable from the LAN or WAN into the KVM Over the NET™ switch primary network interface socket.
5. (Optional) Plug another cable from the LAN or WAN into the KVM Over the NET™ switch backup (secondary) network interface socket.
6. (Optional) Use Cat 5e/6 cable to connect the KVM Over the NET™ switch PON port to an SA0142 Adapter. Connect the Adapter to the PON IN port of a PN0108 Power Over the Net™ unit.
7. (Optional) Use Cat 5e/6 cable to connect the KVM Over the NET™ switch Modem port to an SA0142 Adapter. Connect the Adapter's serial connector to the modem's DB-9 port.
8. 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.
9. Plug the power cord(s) supplied with this package into the KVM Over the NET™ switch power socket, and then into an AC power source.

After the KN2116A / KN2132 / KN4116 / KN4132 is cabled up you can turn on the power. After it is powered up, you can turn on the servers.



# 7

## Hardware Installation 3

Mouse DynaSync is only available for Windows and Mac (OS4.0 or higher). Systems connected to the KN2116A / KN2132 / KN4116 / KN4132 with a KA9170 and KA7170 KVM Adapter, and whose adapter attribute OS setting is configured for Win or Mac. All other configurations must use manual mouse synchronization. These procedures are to be performed on the computers attached to the KN2116A / KN2132 / KN4116 / KN4132's ports - not on the computer you are using to access the KN2116A / KN2132 / KN4116 / KN4132.

### Windows Systems:

**Note:** You must use the generic mouse driver supplied with Windows.

- XP / Server 2003 -- middle position; Enhance pointer precision: off
- 2000 / ME -- Mouse motion: middle position; Acceleration: off
- NT / 98 / 95 -- Mouse speed: slowest

### Sun / Linux Systems:

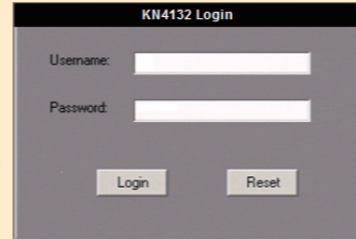
Open a terminal session and issue the following command:

- Sun: xset m 1
- Linux: xset m 0

# 8

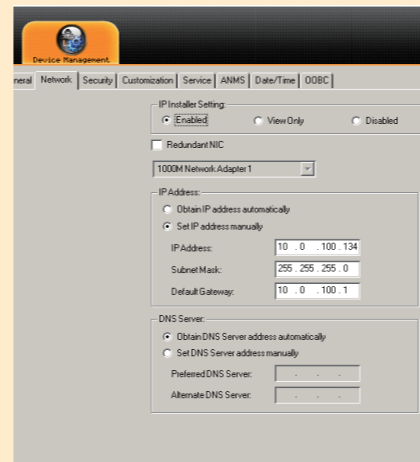
## Administrator Setup

Once the KN2116A / KN2132 / KN4116 / KN4132 has been cabled up, the Super Administrator needs to set the unit up for user operation using the local console. When the local console has been connected up and the KN2116A / KN2132 / KN4116 / KN4132 turned on, a login prompt appears on the console monitor:



Since this is the first time you are logging in, use the default Username: administrator; and the default Password: password. For security purposes, use the User Management function to change these to a unique Username and Password

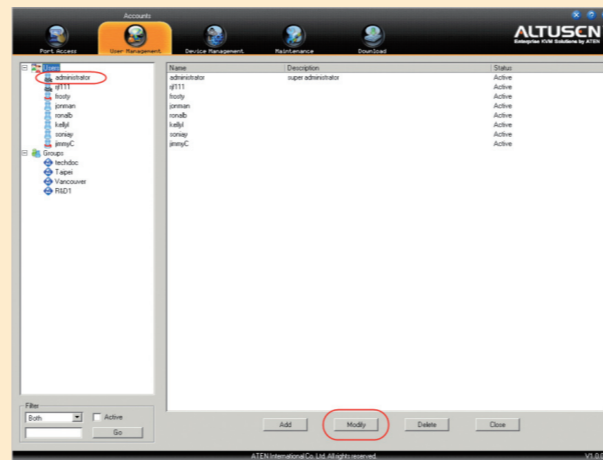
Select Device Management > Network to set up the switch for network operation.



- If you are only using one LAN but connect both ports in case the primary connection fails, check Redundant NIC; if you are using the secondary LAN port for a second IP address, leave Redundant NIC unchecked.
- 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.
- If you are using the secondary LAN port for a second IP address, drop down the list under Redundant NIC and select Network Adapter 2 and set the IP and DNS addresses for it.

To change the default username and password > Select User Management > administrator > Modify to change the default Super Administrator username and password to something unique.

To add users, select users in the left panel at the user management page, then click Add the bottom of the main panel.



# 9

## Operation

After you have successfully logged in, the KN2116A / KN2132 / KN4116 / KN4132 Main Screen appears with the Port Access page displayed.

### The Control Panel

The Control Panel consists of three rows: a row of icons at the top, with two text rows below it.



By default, the upper text row shows the video resolution of the remote display. As the mouse pointer moves over the icons in the icon bar, however, the information in the upper text row changes to describe the icon's function. In addition, if a message from another user is entered in the message board, and you have not opened the message board in your session, the message will appear in the upper row.

The lower row shows the IP address of the device you are accessing at the left of the row. The center of the row indicates which bus the user is on (the number before the slash), and the total number of users on that bus (the number behind the slash).

Right clicking in the text row area brings up a menu-style version of the toolbar

The functions that the icons perform are described in the table below:

	Control Panel		Zoom in		Auto Scan Mode
	Macros		On-screen keyboard		Panel Array Mode
	Video Options		Mouse pointer type		Compensation mode selection
	Video and mouse autosync operation		Automatic mouse sync		Recall the GUI
	Full Screen Mode		User macros list		Control Panel Configuration
	Snapshot		Skip to the first port		Exit
	Message Board		Skip to the previous port		Lock indicator
	Click to send a Ctrl+Alt+Del		Skip to the next port		
	Toggle color and gray scale views		Skip to the latest port		

### Port Operation

The KVM Over the NET™ switch's interface provides a toolbar to help you with port switching operations from within the captured port. To bring up the toolbar, tap the GUI Hotkey (Scroll Lock or Ctrl) twice. The toolbar appears at the upper left corner of the screen.

### Note:

1. You can adjust the toolbar transparency.
2. The toolbar functions and icons are also incorporated in the Control Panel. If you choose to enable them in the Control Panel, you can disable the Toolbar. To recall the Port Access Connections page when there is no Toolbar, simply tap the GUI hotkey twice.

# 10

## Specifications

Function	KN2116A	KN2132	KN4116	KN4132
Computer Connections	16	32	16	32
Direct	16	32	16	32
Max	256 (via Cascade)	512 (via Cascade)	256 (via Cascade)	512 (via Cascade)
Console Connections	1	1	1	1
Local	1	1	1	1
Remote	2	2	4	4
Port Selection	Pushbutton/ GUI/ Hotkey			
Connectors	Keyboard	1 x 6-pin Mini-DIN, 1 x USB Type A		
	Console Port	1 x HDB-15		
	Video	1 x 6-pin Mini-DIN, 1 x USB Type A		
	Mouse	1 x 6-pin Mini-DIN, 1 x USB Type A		
	KVM Port	16 x RJ-45	32 x RJ-45	16 x RJ-45
Power	1 x 3-prong AC socket			
LAN	2 x RJ-45			
PON	1 x RJ-45			
Modem	1 x RJ-45			
USB	3 x USB			
Switches	Reset, Power, Port Selection			
LEDs	On Line, Selected, Power, Link 10 / 100 / 1000 Mbps			
Emulation	Keyboard/Mouse			
Video	1600 x 1200 @ 60Hz; DDC2B			
Scan Interval	1 - 255 Seconds			
I/P Rating	100-240VAC; 50-60Hz; 1.0A			
Power Consumption	110V/33.00W	110V/33.40W	110V/39.60W	110V/45.80W
	230V/33.80W	230V/34.20W	230V/40.00W	230V/46.30W
Environment	Operating Temp.			
	0-50°C			
Physical Properties	Storage Temp.			
	-20-60°C			
Housing	Humidity			
	0-80% RH, Non-condensing			
	Metal			
Weight	5.46 kg	5.59 kg	5.52 kg	5.63 kg
	Dimensions ( L x W x H )			
43.36 x 41.35 x 4.40 cm(19" 1U)				