ALTUSEN™
Enterprise KVM Solutions by ATEN

KN2124v/KN2140v/KN4124v/KN4140v
KVM Over the NET Quick Start Guide

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1 Package Contents

1 KN2124v, KN2140v, KN4124v, KN4140v KVM Over the Net™ Switch
2 SA0142 Serial Adapters (RJ45-F to DB9-M; DTE to DCE)
1 Grounding Wire
2 Power Cords
1 5-in-1 Console Cable
1 Rack Mount Kit   1 User Manual
1 Foot Pad Set (4 pcs.)   1 Quick Start Guide

2-1 Requirements

Local Client Computers
Local client computers are the ones used to log into the switch over the internet . The following equipment must be installed on
• 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.

Remote Servers
Remote servers are the ones 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

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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 (or higher) cable is required to connect the KN2124v / KN2140v /KN4124v / KN4140v to one of the KVM Adapter Cables
• The following KVM Adapter Cables are required for use with the KN2124v / KN2140v / KN4124v / KN4140v
Note: If you use Adapter Cables that were purchased prior to your switch purchase, you may have to upgrade the Adapter Cable's firmware. You can upgrade the Adapter Cable's firmware from the Maintenance page

Function	Module
Connect to devices with PS/2 ports	KA9120 / KA7120
Connect to devices with USB ports (all platforms-PC, Mac, Sun)	KA9170 / KA7170
Connect to Sun Legacy Computers	KA9130 / KA7130
Connect to serial based devices	KA9140 / KA7140
Connect to devices with USB ports; virtual media support	KA7175
Connect to devices with USB ports, virtual media and audio support	KA7176

Operating Systems
Supported operating systems for Local Client computers that log into the KVM Over the NET™ switch include Windows 2000 and higher, and those capable of running Sun's Java Runtime Environment (JRE) 6, Update 3, or higher.
Supported operating systems for the remote servers that are connected to the switch's ports 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 KN2124v / KN2140v / KN4124v/ KN4140v include the following:

Browser	Version	Browser	Version
IE	6 and higher	Safari	2.0 and higher*
Firefox	1.5 and higher	Opera	9.0 and higher
Mozilla	1.7 and higher	Netscape	8.1 and higher

* If Safari freezes when using the Snapshot feature you may upgrade to Mac OS 10.4.11 and Safari 3.04.

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3 Hardware Review (Front View)

1. Power LED
2. Port LEDs
3. LAN LEDs
4. USB Ports
5. Reset Switch
6. Audio Ports
7. Port Switching Buttons
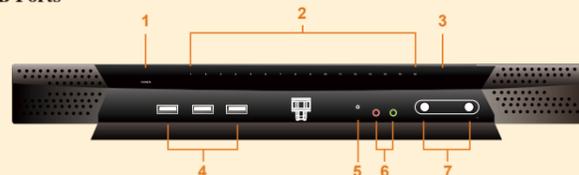
Note: The figure above shows the front panel of a KN2140v / KN4140v. The KN2124v / KN4124v differs in that there are fewer port LEDs.

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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 Ports
9. KVM Ports
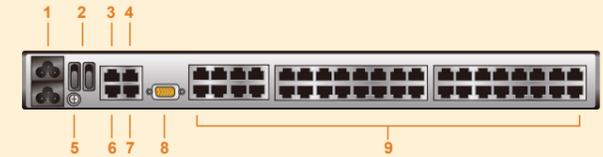
Note: The figure above shows the rear panel of a KN2140v / KN4140v with two blocks of 16 KVM ports and one block of 8 (40 ports in total). The KN2124v / KN4124v differs in that it only has a single block of 16 KVM ports and one bock of 8 (24 ports in total).
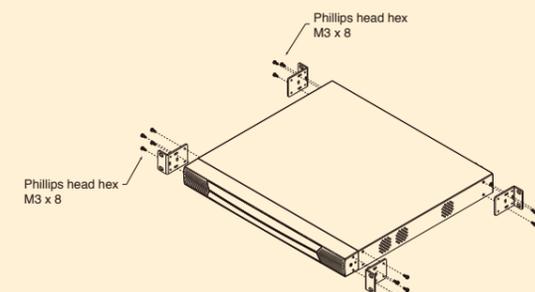

5-1 Hardware Installation 1

Rack Mounting
The KN2124v /KN2140v / KN4124v / KN4140v 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:

Phillips head hex M3 x 6
Phillips head hex M3 x 6
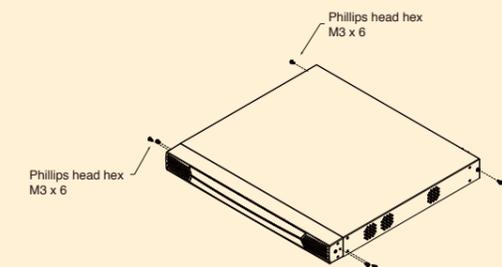
2. Use the M3 x 8 Phillips head hex screws supplied with the rack mount kit to screw the rack mounting brackets into the front of the unit:

Phillips head hex M3 x 8
Phillips head hex M3 x 8

3. Position the device in the front of the rack and align the holes in the mounting brackets with the holes in the rack.

In a Single Stage installation, there are no additional switches cascaded from the KN2124v / KN2140v / KN4124v / KN4140v. To set up a single stage installation, refer to the installation diagrams (the numbers in the diagram correspond with the numbers of the instruction steps), and do the following:

1. Use the 5-in-1 Console Cable supplied with the package to connect your Local Console devices to the unit.

   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 KN2124v / KN2140v / KN4124v / KN4140v does not support distances that exceed 20m between itself and the local monitor.

2. Use Cat. 5e cable to connect any available KVM port to a KVM Adapter Cable that is appropriate for the computer you are installing

3. Plug the connectors on the KVM Adapter Cable into the appropriate ports of the computer you are installing.

4. Plug a cable from the LAN or WAN into the KN2124v / KN2140v /KN4124v / KN4140v's primary network interface socket.

5. (Optional) Plug another cable from the LAN or WAN into the KN2124v /KN2140v / KN4124v / KN4140v backup (secondary) network interface socket.

6. (Optional) Use Cat. 5e cable to connect the KN2124v / KN2140v /KN4124v / KN4140v's 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 cable to connect the KN2124v / KN2140v /KN4124v / KN4140v's 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.

   Note: Do not omit this step. Proper grounding helps to prevent damage to the unit from surges or static electricity.

9. Plug the power cord(s) supplied with this package into the KN2124v /KN2140v / KN4124v / KN4140v's Power Socket, and then into an AC power source. When using a single power socket, be sure to turn on the correct power switch. When using both power sockets, either of the power switches can be used to turn on the KVM switch, or turn on both power switches to enable dual power.

After the KN2124v / KN2140v / KN4124v / KN4140v is cabled up you can turn on the power. After it is powered up, you can turn on the computers.
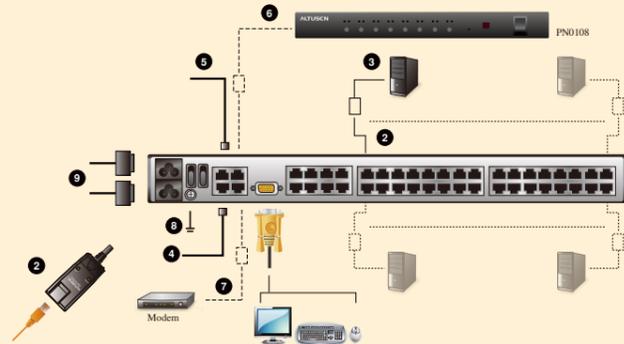
Mouse DynaSync is only available for Windows and Mac (OS4.0 or higher).systems connected to the KN2124v / KN2140v / KN4124v / KN4140v with a KA9170/ KA7170/ KA7175/ KA7176 KVM Adapter, and whose adapter attribute OS setting is configured for Win or Mac All other configurations must use manual mouse synchronization. These procedures are to be performed on the computers attached to the KN2124v / KN2140v / KN4124v / KN4140v 's ports - not on the computer you are using to access the KN2124v / KN2140v / KN4124v / KN4140v.

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

Once the KN2124v / KN2140v / KN4124v / KN4140v 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 KN2124v / KN2140v / KN4124v / KN4140v turned on, a login prompt appears on the console monitor:
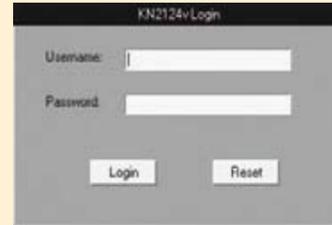
Since this is the first time you are logging in, use the default Username: **administrator**; and the default Password: **password**. For security purposes, use the User Management function to change these to a unique Username and Password

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.

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 pane at the user management page, l, then click Add the bottom of the main panel.
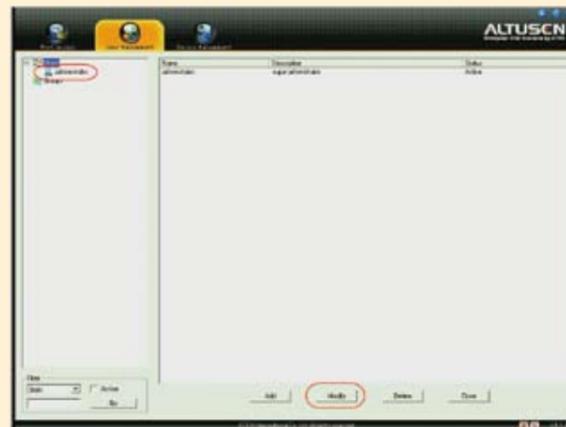
After you have successfully logged in, the KN2124v / KN2140v / KN4124v / KN4140v Main Screen appears with the Port Access page displayed,
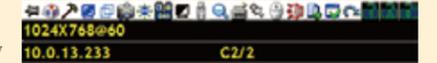
The Control Panel
The Control Panel consists of three rows: a row of icons at the top, with two text rows below it.

Ordinarily, the top text row shows the video resolution of the remote display, while the lower row shows the IP address of the device at the remote location at the left and the number of the bus and bus position that the logged in user is on in the center.

As the mouse pointer moves over the icons in the icon bar, however, the information in the top row changes to describe the icon's function. If a message is entered in the message board, and you have not opened the message board in your session, the message scrolls across the bottom row.

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

🖼	This is a toggle. Click to make the Control Panel persistent – i.e., it always displays on top of other screen elements. Click again to have it display normally.	🔍	Click to zoom the remote display window. **Note:** This feature is only available in windowed mode (Full Screen Mode is off).
	Click to bring up the Macros dialog box	⌨	Click to bring up the on-screen keyboard
	Click to bring up the Video Options dialog box. Right-click to perform a quick Auto Sync		Click to select the mouse pointer type. **Note:** This icon changes depending on which mouse pointer type is selected
🔨	Click to perform a video and mouse autosync operation. It is the same as clicking the Auto-sync button in the Video Options dialog box	🐭	Click to toggle Automatic or Manual mouse sync. When the selection is Automatic, a green √ appears on the icon. When the selection is Manual, a red X appears on the icon.
	Toggles the display between Full Screen Mode and Windowed Mode.		Click to toggle the local computer's speaker on or off.
📷	Click to take a snapshot (screen capture) of the remote display.		Click to display a dropdown list of user macros. Access and run macros more conveniently rather than using the Macros dialog box
	Click to bring up the Message Board.		Click to bring up the Control Panel Configuration dialog box.
Ctrl Alt Del	Click to send a Ctrl+Alt+Del signal to the remote system.		Click to exit the remote view. • Exiting from a viewer accessed session brings you back to the web browser Main Page. • Exiting from a WinClient AP session logs you out and brings you back to the login dialog box • Exiting from a Java Client AP session logs you out and closes the Java program.
	Click to toggle the remote display between color and gray scale views.		These Lock Key LEDs show the Num Lock, Caps Lock, and Scroll Lock status of the remote computer. Click on the icon to toggle the status. Note: When you first connect, the LED display may not be accurate. To be sure, click on the LEDs to set them.
	Click to bring up the Virtual Media dialog box. The icon changes when a virtual media device is started on the port. This icon displays in gray when the function is disabled or not available.		

Port Operation
Click on a port in the left panel to switch to that port. The OSD provides a toolbar to help you control the KN2124v / KN2140v / KN4124v / KN4140v from within the captured port. To bring up the toolbar, tap the OSD 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 OSD and select the port again.

	Function		KN2124v	KN2140v	KN4124v	KN4140v
Computer Connections	Direct		24	40	24	40
	Max		384 (via Cascade)	640 (via Cascade)	384 (via Cascade)	640 (via Cascade)
Console Connections	Local		1		1	
	Remote		2		4	
Port Selection			OSD, Hotkey, Pushbutton			
Connectors	Console Ports	Keyboard	1 x SPHD-18 (F)			
		Video				
		Mouse				
	KVM Ports		24 x RJ-45 (F)	40 x RJ-45(F)	24 x RJ-45(F)	40 x RJ-45(F)
	Power		2 x 3-prong AC Socket			
	LAN		2 x RJ-45 Female (Black)			
	Modem		1 x RJ-45 Female (Black)			
	USB		3 x USB Type A Female (White)			
	PON		1 x RJ-45 Female (Black)			
	Audio		2 x Audio Jack Female			
Switches	Reset		1 x Semi-recessed Pushbutton			
	Power		2 x Rocker Switch			
	Port Selection		2 x Pushbutton			
LEDs	On Line		24 (Green)			
	Selected		24 (Red)			
	Power		1 (Blue)			
	Link 10/100/1000 Mbps		2 (Red/Red + Green/Green)			
Emulation	Keyboard/Mouse		PS/2, USB (PC, Mac, Sun); Serial			
Video			1600 x 1200 @60Hz			
Scan Interval			1-255 Seconds			
I/P Rating			100-240 VAC; 50-60Hz; 1A			
Power Consumption	Single Power		115V/36.4W; 230V/37.2W	115V/36.8W; 230V/37.7W	115V/43.7W; 230V/44.6W	115V/49W; 230V/50W
	Dual Power		115V/41.8W; 230V/42.5W	115V/42.2W; 230V/43W	115V/49.1W; 230V/50W	115V/54W; 230V/56W
Environment	Operating Temp.		0-50°C			
	Storage Temp.		-20-60°C			
	Humidity		0-80% RH, Non-condensing			
Physical Properties	Housing		Metal			
	Weight		5.99 kg	6.08 kg	6.04 kg	6.12 kg
	Dimensions (LxWxH)		43.36 x 40.94 x 4.40 cm (19"1U)			