



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)
- 2 Power Cords
- 2 Utility Power Cords
- 1 5-in-1 Console Cable
- 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 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 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 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 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

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 remote user computers that log into the KN2124v / KN2140v / KN4124v / KN4140v 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 KN2124v / KN2140v / KN4124v / KN4140v 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:

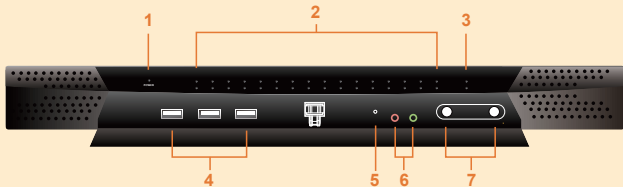
Browser		Version
Internet Explorer		6 and higher
Chrome		8.0 and higher
Firefox	Windows	3.5 and higher
	Linux	3.0 and higher
Safari	Windows	4.0 and higher
	Mac	3.1 and higher
Opera		10.0 and higher
Mozilla	Windows	1.7 and higher
	SUN	1.7 and higher
Netscape		9.0 and higher

* If Safari freezes when using the Snapshot feature you may 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. Audio Ports
- 7. Port Switching Buttons

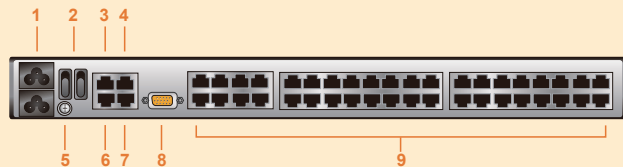


Note: The figure above shows the front panel of a KN2140v / KN4140v. The KN2124v / KN4124v differs in that there are fewer port LEDs.

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

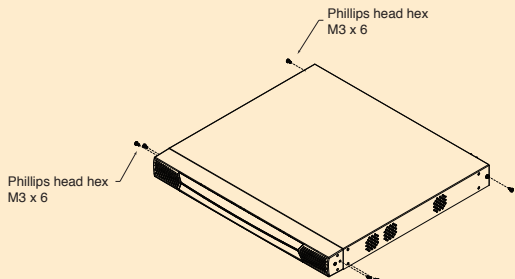
Hardware Installation 1

Rack Mounting

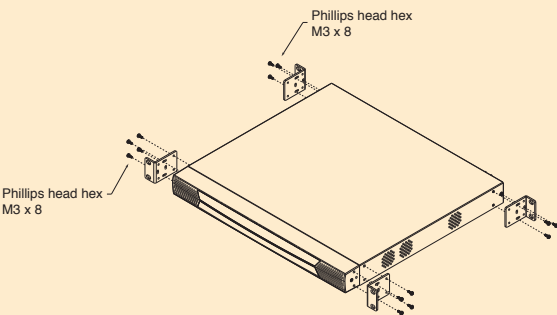
The KN2124v / KN2140v / KN4124v / KN4140v can be mounted in a 19" (1U) rack. The mounting brackets can screw into either the front or the back of the unit so that it can attach to the front or the back of the rack.

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

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



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



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

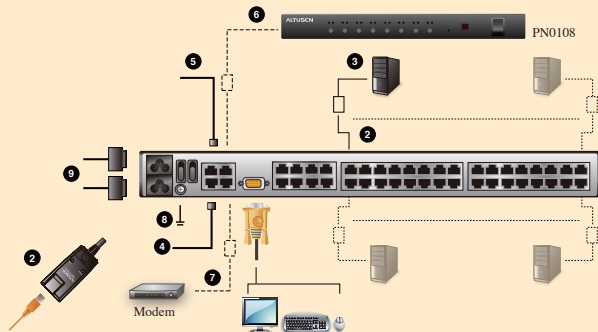
5-2

Hardware Installation 2

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/6 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 server 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/6 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/6 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 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 servers.



5-3

Hardware Installation 3

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:

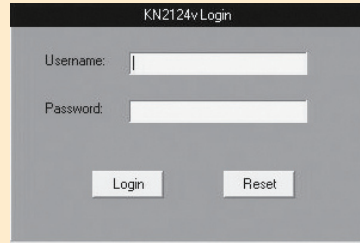
Open a terminal session and issue the following command:

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

6

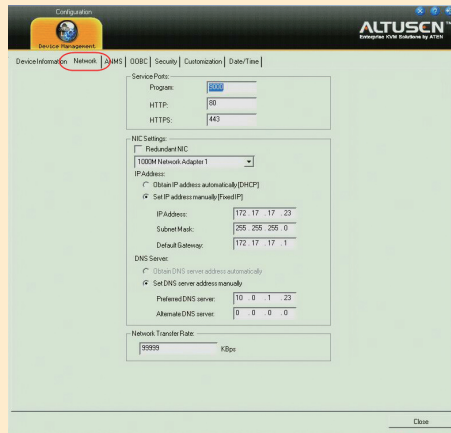
Administrator Setup

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

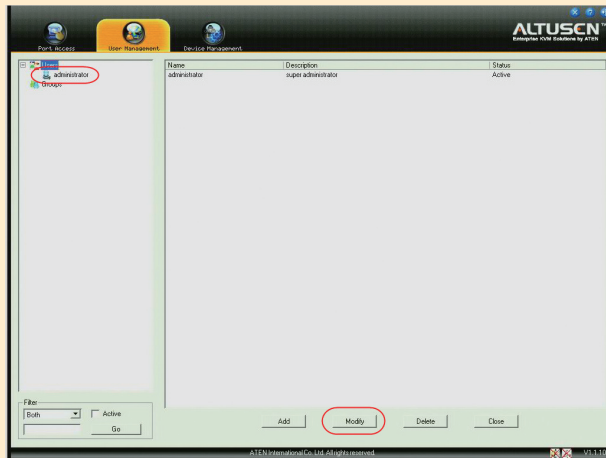
Select Device Management → Network to set up the switch for network operation.



- 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, then click Add the bottom of the main panel.



7

Operation

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.



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).

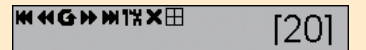
Right clicking in the text row area brings up a menu-style version of the toolbar

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

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

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.

8

Specifications

Function	KN2124v	KN2140v	KN4124v	KN4140v
Computer Connections	24	40	24	40
Connections	384 (via Cascade)	640 (via Cascade)	384 (via Cascade)	640 (via Cascade)
Console Connections	Local	1	1	1
Remote	2	2	2	2
Port Selection	OSD, Hotkey, Pushbutton			
Console Ports	1 x SPHD-18 (F)			
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	2 x 3-prong AC Socket	2 x 3-prong AC Socket	2 x 3-prong AC Socket
LAN	2 x RJ-45 Female (Black)	2 x RJ-45 Female (Black)	2 x RJ-45 Female (Black)	2 x RJ-45 Female (Black)
Modem	1 x RJ-45 Female (Black)	1 x RJ-45 Female (Black)	1 x RJ-45 Female (Black)	1 x RJ-45 Female (Black)
USB	3 x USB Type A Female (White)	3 x USB Type A Female (White)	3 x USB Type A Female (White)	3 x USB Type A Female (White)
PON	1 x RJ-45 Female (Black)	1 x RJ-45 Female (Black)	1 x RJ-45 Female (Black)	1 x RJ-45 Female (Black)
Audio	2 x Audio Jack Female	2 x Audio Jack Female	2 x Audio Jack Female	2 x Audio Jack Female
Reset	1 x Semi-recessed Pushbutton	1 x Semi-recessed Pushbutton	1 x Semi-recessed Pushbutton	1 x Semi-recessed Pushbutton
Switches	2 x Rocker Switch	2 x Rocker Switch	2 x Rocker Switch	2 x Rocker Switch
Port Selection	24 (Green)	24 (Green)	24 (Green)	24 (Green)
On Line	24 (Red)	24 (Red)	24 (Red)	24 (Red)
Selected	1 (Blue)	1 (Blue)	1 (Blue)	1 (Blue)
Power	2 (Red/Red + Green/Green)	2 (Red/Red + Green/Green)	2 (Red/Red + Green/Green)	2 (Red/Red + Green/Green)
LEDs	Link 10/100/1000 Mbps	Link 10/100/1000 Mbps	Link 10/100/1000 Mbps	Link 10/100/1000 Mbps
Emulation	Keyboard/Mouse	Keyboard/Mouse	Keyboard/Mouse	Keyboard/Mouse
Video	PS/2, USB (PC, Mac, Sun), Serial	PS/2, USB (PC, Mac, Sun), Serial	PS/2, USB (PC, Mac, Sun), Serial	PS/2, USB (PC, Mac, Sun), Serial
Scan Interval	1600 x 1200 @60Hz	1600 x 1200 @60Hz	1600 x 1200 @60Hz	1600 x 1200 @60Hz
IP Rating	1-255 Seconds	1-255 Seconds	1-255 Seconds	1-255 Seconds
Power Consumption	100-240 VAC, 50-60Hz, 1A	100-240 VAC, 50-60Hz, 1A	100-240 VAC, 50-60Hz, 1A	100-240 VAC, 50-60Hz, 1A
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
Operating Temp.	0-50°C	0-50°C	0-50°C	0-50°C
Storage Temp.	-20-60°C	-20-60°C	-20-60°C	-20-60°C
Humidity	0-80% RH, Non-condensing	0-80% RH, Non-condensing	0-80% RH, Non-condensing	0-80% RH, Non-condensing
Housing	Metal	Metal	Metal	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)	43.36 x 40.94 x 4.40 cm (19" 1U)	43.36 x 40.94 x 4.40 cm (19" 1U)	43.36 x 40.94 x 4.40 cm (19" 1U)