

## KH1508Ai / KH1516Ai Cat 5 High-Density KVM Over the NET™ Quick Start Guide

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Online Registration  
 • http://eservice.aten.com  
 Technical Phone Support  
**International:**  
 • 886-2-8692-6959  
**China:**  
 • 86-10-5255-0110  
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## 1 Package Contents

- 1 KH1508Ai or KH1516Ai Cat 5 High-Density KVM Over the NET™ Switch
- 1 Firmware Upgrade Cable
- 1 Laptop USB Console Cable
- 1 Power Cord
- 1 Rack Mount 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](http://www.aten.com), and download the full user manual.

## 2 Requirements

### General

- For best results, we recommend that the computers used to access the KH1508Ai / KH1516Ai have at least a P III 1 GHz processor, and that their screen resolution is set to 1024 x 768
- For best results, we recommend an Internet connection speed of at least 128 kbps
- Browsers must support 128 bit data encryption
- To run the Windows client, you must have DirectX 8.0 or higher installed
- To run the Java client, you must have Sun's JRE 6 update 3 or higher installed
- To run the Log Server, you must have the Microsoft Jet OLEDB 4.0 (or higher) driver installed

### Console

- A VGA, SVGA, or Multisync monitor capable of the highest resolution that you will be using on any computer in the installation.
- A USB or PS/2 style mouse
- A USB or PS/2 style keyboard

### Computers

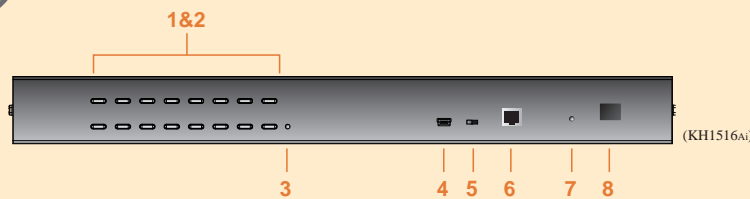
- The following equipment must be installed on the computers that connect to the KH1508Ai or KH1516Ai's KVM ports:
- A VGA, SVGA or Multisync port
  - A Type A USB port and USB host controller (for USB KVM Adapter Cable Connection, see below)
  - 6-pin mini-DIN keyboard and mouse ports (for PS/2 KVM Adapter Cable Connection, see below)

### KVM Adapter Cables

- Cat 5e/6 cable is required to connect the KH1508Ai / KH1516Ai to one of the KVM adapter cables.
- The following KVM adapter cables are required for use with the KH1508Ai / KH1516Ai:

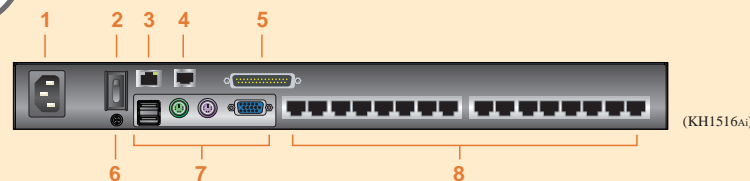
Function	Module
Connect to devices with PS/2 ports	KA7920 / KA7520 / KA7120 / KA9520 / KA9120
Connect to devices with USB ports	KA7970 / KA7570 / KA7170 / KA9570 / KA9170
Connect to Sun Legacy systems (with 13W3 port)	KA9130 / KA7130
Connect to Sun USB systems	KA9170 / KA7170
Connect to serial based devices	KA9140

## 3 Hardware Review (Front View)



- |                               |                                     |
|-------------------------------|-------------------------------------|
| 1. Port Selection Pushbuttons | 5. Firmware Upgrade Recovery Switch |
| 2. Port LEDs                  | 6. Firmware Upgrade Port            |
| 3. Reset Switch               | 7. Power LED                        |
| 4. Laptop USB Console Port    | 8. Station ID LED                   |

## 4 Hardware Review (Rear View)



- |                 |                               |
|-----------------|-------------------------------|
| 1. Power Socket | 5. Daisy Chain Port           |
| 2. Power Switch | 6. Grounding Terminal         |
| 3. LAN Port     | 7. Local Console Port Section |
| 4. PON Port     | 8. KVM Port Section           |

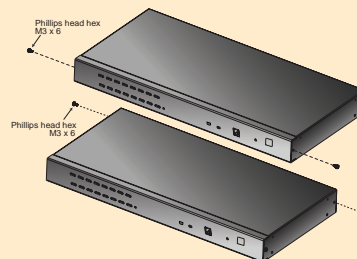
**Note:** The front and rear panel views are similar for the KH1508Ai, the difference being that the KH1508Ai has only one row of LED lights (front) and one row of CPU ports (rear)

## 5-1 Hardware Installation

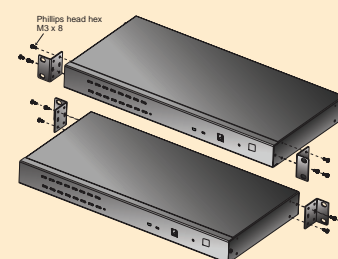
### Rack Mounting

The KH1508Ai / KH1516Ai can be mounted in a 19" (1U) racks. 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 rack mount the unit:

1. Remove the 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.

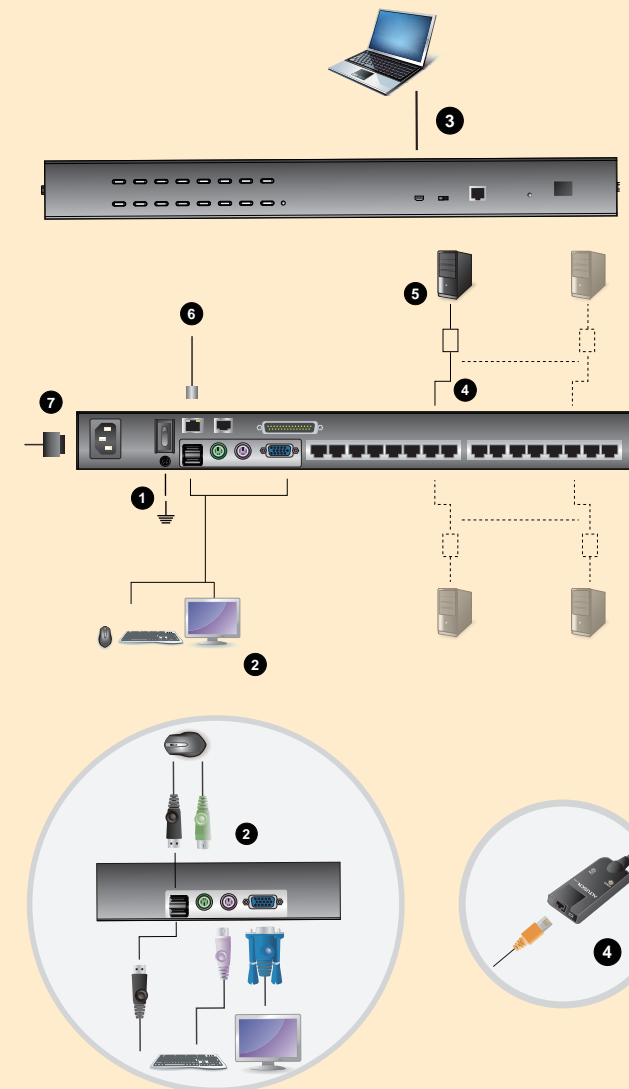
## 5-2 Hardware Installation

### Single Station Installation

In a single stage installation, there are no additional KVM switches daisy chained down from the KH1508Ai / KH1516Ai. To set up a single stage installation (the numbers in the diagram correspond with the numbers of the instruction steps), and do the following:

1. Ground the KH1508Ai / KH1516Ai by connecting one end of the grounding 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.
2. Plug the console keyboard, monitor, and mouse into the unit's console ports. The ports are color coded and marked with icons for easy identification.  
**Note:** You can use any combination of keyboard and mouse connections. For example, you can use a PS/2 keyboard with a USB mouse.
3. If you are using a laptop to control the KH1508Ai / KH1516Ai locally, use the Laptop USB Console Cable included in the package to connect the laptop to the KH1508Ai / KH1516Ai's Laptop USB Console port, located on the unit's front panel.
4. 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  
**Note:** To support a resolution of 1280x1024@75Hz, the recommended maximum distance between the unit and the KVM adapter cable is 50 meters; to support a resolution of 1600x1200@60Hz, the recommended maximum distance is 40 meters.
5. Connect the KVM adapter cable to the computer.  
 Plug the connectors on the KVM adapter cable into the appropriate ports of the computer you are installing.
6. Plug the LAN or WAN cable into the KH1508Ai / KH1516Ai's LAN port.
7. Plug the female end of the power cord into the KH1508Ai / KH1516Ai's power socket; plug the male end into an AC power source.

After the KH1508Ai / KH1516Ai is cabled up, you can turn on the power. After it is powered up, you can turn on the servers.



## 6-1 Operation

### Basic Operation

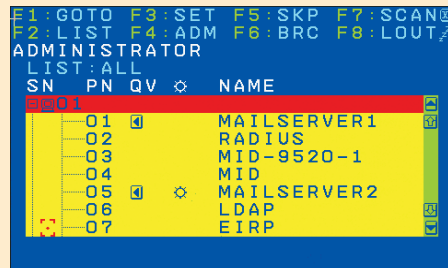
KH1508Ai / KH1516Ai installations provide five methods to obtain instant access to any computer in your installation: Manual, OSD, Hotkey, Laptop Console, and GUI

### Manual

For manual port selection, simply press the Port Switch that corresponds to the device you wish to access.

### OSD

OSD (On Screen Display), provides a text-based menu driven interface to the computer switching procedure. All procedures start from the OSD Main Screen. To display the Main Screen, tap the OSD hotkey twice. The default hotkey is [Scroll Lock]. Before the OSD Main Screen comes up, a login dialog box appears requesting a username and password. You must provide a valid username and password in order to continue. The first time that the OSD is accessed, you must use the default username and password. The default username is **administrator**; the default password is **password**. After logging in with the default username and password, the OSD Main Screen opens in Administrator mode as below.



### Keyboard Hotkeys

Hotkeys allow you to conveniently provide KVM focus to a particular computer from the local console keyboard, instead of having to manually select them by pressing Port Selection switches

### Invoking Hotkey Mode

Number Lock and Minus Keys

1. Hold down the **Num Lock** key;
  2. Press and release the **minus** key;
  3. Release the **Num Lock** key;
- [Num Lock] + [-]

Control and F12 Keys

1. Hold down the **Ctrl** key;
  2. Press and release the **F12** key;
  3. Release the **Ctrl** key;
- [Ctrl] + [F12]

### Hotkey Summary Table

[Num Lock] + [-] or [Ctrl] + [F12]	[A] [Enter]	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.
	[B]	Toggles the Beeper On or Off.
	[Esc] or [Spacebar]	Exits hotkey mode.
	[F1]	Sets Operating System to Windows
	[F2]	Sets Operating System to Mac
	[F3]	Sets Operating System to Sun
	[F5]	Performs a keyboard / mouse reset on the target computer.
	[H]	Toggles the Hotkey invocation keys.
	[Port ID] [Enter]	Switches access to the computer that corresponds to that Port ID.
	[R] [Enter]	Administrator only hotkey. It returns the switch's settings to their default values.
	[T]	Toggles the OSD Hotkey between [Ctrl] [Ctrl] and [Scroll Lock] [Scroll Lock].
	[←]	Invokes Skip Mode and skips from the current port to the first accessible port previous to it.
[→]	Invokes Skip Mode and skips from the current port to the next accessible port.	
[↑]	Invokes Skip Mode and skips from the current port to the last accessible port of the previous Station.	
[↓]	Invokes Skip Mode and skips from the current port to the first accessible port of the next Station.	

## 6-2 Operation

### Local Console Login

When the local console is attached and there is no user logged in, the KH1508Ai / KH1516Ai login screen appears on the monitor. Simply key in your valid Username and Password, then click Login to bring up the Local Console Main Page. The Local Console Main Page is similar to the Web Browser, WinClient and Java Client Main Pages .

### Laptop USB Console Login

Use an appropriate USB cable to connect your laptop to the KH1508Ai / KH1516Ai's laptop USB console port, located on the unit's front panel. The KH1508Ai / KH1516Ai appears as a virtual drive in the laptop's file system. Locate the laptop console AP on the virtual CD ROM and double click the ALTUSEN icon. The login screen appears

### Browser Login

Open an Internet browser and specify the IP address of the switch you want to access in the browser's location bar.

**Note:** For security purposes, a login string may have been set by the administrator. If so, you must include a forward slash and the login string along with the IP address when you log in.

For example: 192.168.0.100/kh1516ai

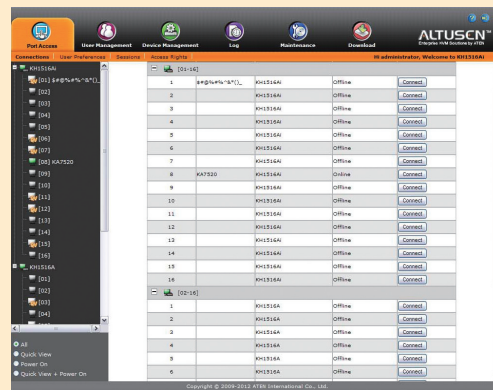
If you don't know the IP address and login string, ask your Administrator.

### Windows Client / Java Client AP Login

To connect to the KH1508Ai / KH1516Ai, go to the location on your hard disk that you downloaded the Windows AP Client / Java AP Client program to, and double-click its icon to bring up the Windows Client Connection Screen

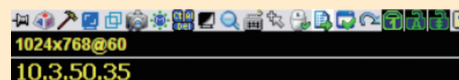
### GUI Main Page

Once you have successfully logged in, the KH1508Ai / KH1516Ai user interface Main Page appears with the Port Access page displayed. The look of the page varies slightly, depending on which method you used to log in.



### 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. 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		Message Board		Automatic mouse sync
	Macros		Click to send a Ctrl+Alt+Del		User macros list
	Video Options		Toggle color and gray scale views		Control Panel Configuration
	Video and mouse autosync operation		Zoom in		Exit
	Full Screen Mode		On-screen keyboard		Lock indicator
	Snapshot		Mouse pointer type		

## 6-3 Operation

### Port Operation

The KH1508Ai / KH1516Ai 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.

## 7 Specifications

Function		KH1508Ai	KH1516Ai
Computer Connections	Direct	8	16
	Maximum	128 (via daisy chain)	256 (via daisy chain)
Port Selection			
OSD; Hotkey; Pushbutton			
Connectors	Console Port	Keyboard	1 x 6-pin Mini-DIN Female (Purple) 1 x USB Type A Female (White)
		Video	1 x HDB-15 Female (Blue)
		Mouse	1 x 6-pin Mini-DIN Female (Green) 1 x USB Type A Female (White)
	KVM Port	8 x RJ-45 Female	16 x RJ-45 Female
	Daisy Chain Ports	1 x DB-25 Male (Black)	
	Power	1 x 3-prong AC socket	
	LAN	1 x RJ-45 Female	
	F/W Upgrade	1 x RJ-11 Female (Black)	
	PON	1 x RJ-45 Female	
	Laptop USB Console (LUC)Port	1 x USB Mini Type B Female (Black)	
Switches	Reset	1 x Semi-recessed Pushbutton	
	Power	1 x Rocker	
Port Selection	8 x Pushbutton	16 x Pushbutton	
	On Line	8 (Green)	16 (Green)
LEDs	Selected	8 (Orange)	16 (Orange)
	Power	1 (Blue)	
	Station ID	1 x 2-digit 7-segment (Orange)	
	Link	1 (Orange)	
	10 / 100Mbps	1 (Orange / Green)	
Emulation	Keyboard/Mouse	PS/2, USB	
Video	Local	1600 x 1200 @ 60 Hz (40m) ; 1280 x 1024 @ 75 Hz (50 m with KA7xx Adapter Cable)	
	Remote	1600 x 1200 @ 60Hz	
Scan Interval	1-255 secs		
I/P Rating	100-240 VAC; 50/60 Hz; 1A		
Power Consumption	120V/12.5W; 230V/12.7W		
Environment	Operating Temp.	0-50°C	
	Storage Temp.	-20-60°C	
	Humidity	0-80% RH; Non-condensing	
Physical Properties	Housing	Metal	
	Weight	2.80 kg	
	Dimensions ( L x W x H )	43.70 x 16.10 x 4.40 cm (19"/1U)	