

# ALTUSCEN™

Enterprise KVM Solutions by ATEN

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## KH0116 High Density KVM Switch Quick Start Guide

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## 1 Package Contents

The complete KH0116 package consists of:

- 1 KH0116 KVM Switch
- 2 Custom KVM Cable Set
- 1 Firmware Upgrade Cable
- 1 Power Cord
- 1 Rack Mount Kit
- 1 User Manual
- 1 Quick Start Guide

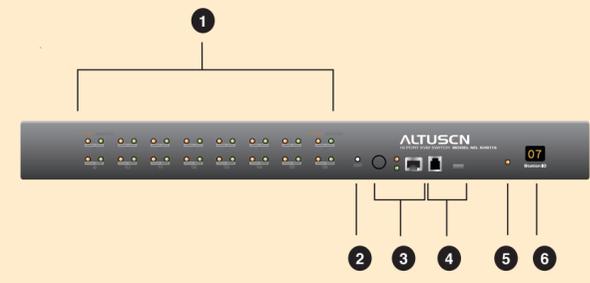
## 2 Requirements

This section details the required hardware components for successful installation and use of the KH0116.

- Console**
- A VGA, SVGA or Multisync monitor capable of the highest resolution that you plan to use on any computer in the installation.
  - A PS/2 style mouse.
  - A PS/2 style keyboard.

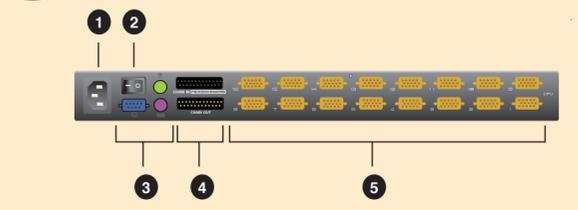
- Computers**
- To use and access the KH0116 successfully, your computer requires the following:
- A VGA, SVGA or Multisync card.
  - A 6-pin mini-DIN (PS/2 style) mouse port. (KH0116 does not support serial mouse).
  - A 6-pin mini-DIN (PS/2 Style) keyboard port

## 3 The KH0116 Unit (Front)



- Port LEDs
- Reset Switch
- Remote Console Area
- Firmware Upgrade Section
- Power LED
- Station ID LED

## 4 The KH0116 Unit (Rear)



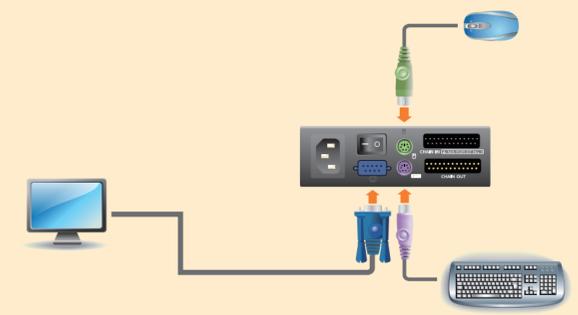
- Power Socket
- Power Switch
- Local Console Port Section
- Daisy Chain Ports
- CPU Port Section

## 5 Hardware Installation

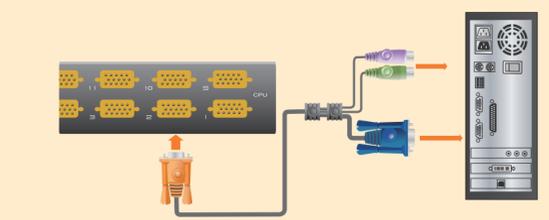
To prevent damage to your equipment, please do the following before you begin installation:

- Make sure that power to all the devices you plan to connect with are turned off.
- Make sure that all devices on the installation are properly grounded. Consult your dealer for technical details if necessary.

1. Plug your keyboard, mouse, and monitor into the unit's Console Ports.



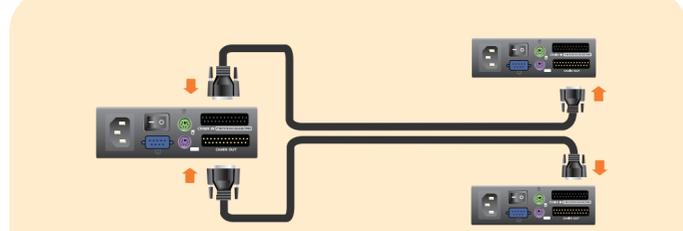
2. Use the Altusen custom KVM cable sets to connect any available CPU Port to the Keyboard, Video and Mouse ports of the computer you are installing.



3. Plug the power cable into the KH0116 power socket, and then plug the power cable into an AC power source.  
 4. Turn on the power to the computers.

**Daisy Chaining**  
 To control even more computers, up to 31 additional KH0116 units can be Daisy Chained down from the first KVM station (KVM switch). In a complete installation, you can control up to 512 computers from a single console. To set up a Daisy Chained installation, do the following:

- Turn off power to all devices with which you plan to connect.
- Use a Daisy Chain cable set to connect the Chain Out port of the parent KH0116 unit to the Chain In port of the child KH0116 unit (First Station Out to Second Station In, Second Station Out to Third Station In, etc.).  
**Note:** Do not use the Chain In port of the First Station. The First Station is the highest-level parent in the chain.



3. Use custom cable sets to connect any available CPU port on the KH0116 installation to the Keyboard, Video and Mouse ports of the computers you are installing (refer to page 11).

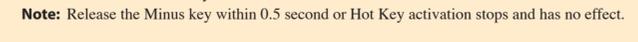
4. To power up the installation, do the following:
- Plug in the power cable for the first KVM station (KVM switch), wait for the unit to ascertain and display its Station ID on the Station ID LED. (The Station ID for the First Stage unit is 01, the ID for the Second Stage unit is 02, the ID for the Third Stage unit is 03, and so on.)
  - Plug in the power cables for each KVM station on the installation in order of Second Station, Third Station and so on. In each case, wait for the Station ID to be ascertained and displayed on the current KVM station before plugging in the next one.
  - After all the KVM stations are up, power on the computers.

## 6 Operation

**Port Selection**  
 You can select ports using the following two methods: entering Hot Key combinations from the keyboard or using the On-Screen Display (OSD).

**Hot Key Operation**  
**Activate Hot Key Mode**  
 All Hot Key operations begin by activating Hot Key Mode.

- To activate Hot Key mode, follow these steps:
- Hold down the Num Lock key.
  - At the same time, press and release the Minus key.
  - Release the Num Lock key.



**When Hot Key Mode is active, the following changes occur:**

- Caps Lock and Scroll Lock LEDs flash in succession. These stop flashing and revert to normal status after exiting Hot Key Mode.
- The screen displays a command line prompt with the word "HOTKEY:" in yellow text on a blue background as well as all subsequent keyed in Hot Key information.
- Ordinary keyboard and mouse function have no effect. You may only input Hot Key compliant keystrokes and mouse clicks.
- Press [Esc] to exit Hot Key Mode.

**Selecting the Active Port**  
 Each CPU port is assigned a Port ID. You can directly access any computer on the installation with a Hot Key combination that specifies the Port ID of the connected CPU Port.

- To select the active port, follow these steps:**
- Activate Hot Key Mode (see page 15).
  - Key in the Port ID.  
 The Port ID numbers display on the Command Line as you type each number. For example, enter "0305" to switch to port 5 of the 3rd KVM on the chain. If you make a mistake, use [Backspace] to erase the wrong number.
  - Press [Enter]. The KVM focus switches to the designated computer and automatically exits Hot Key Mode.

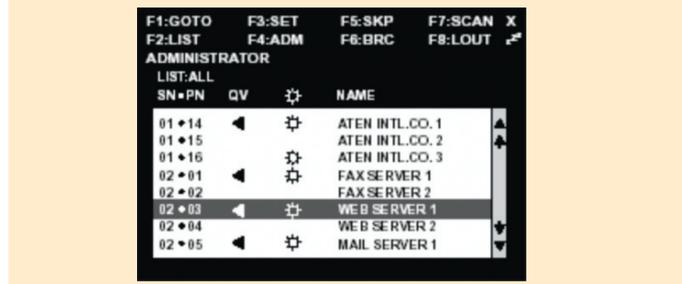
Please refer to the following table for the rest of the Hot Key operations.

[Port ID] [Enter]	Switches access to the computer corresponding to the Port ID.
[T][n][Enter]	Sets the Auto Scan interval to n seconds, where n is a number from 1 to 255.
[A]	Activates Auto Scan mode. To pause Auto Scan, press [P] or left-click mouse. To resume Auto Scan, press any key or left-click mouse.
[Num Lock] + [-]	Activates Skip mode and skips from the current to the previous accessible port.
[=]	Activates Skip mode and skips from the current to the next accessible port.
[↑]	Activates Skip mode and skips from the current port to the last accessible port of the previous KVM switch.
[↓]	Activates Skip mode and skips from the current port to the first accessible port of the next KVM station.
[B]	Toggles the beeper on or off.

**On Screen Display Operation**  
**OSD Overview**  
 To activate the OSD Main Menu follow these steps:  
 1. Press the pre-assigned Hot Key [Scroll Lock] two times. The login window appears.  
**Note:** Optionally, you can assign the Control key as the Main Menu Hot Key. For additional information, see manual for details.

2. Do either of the following:  
 Enter a valid password in the password field and then press [Enter].  
 For a first time OSD activation or if the password has not been set, leave the password field blank and then press [Enter].

The OSD Main Menu appears in Administrator mode. Administrator mode provides access to both Administrator and User functions. You can also set-up operations (including future password authorization) as desired.



- OSD Navigation**
- You can use any of the following methods to navigate the OSD Main Menu screen:
- To dismiss the main menu and deactivate the OSD, press [Esc] or click the X at the upper right corner.
  - To logout of the OSD, press [F8] or click F8 LOUT at the top of the screen.
  - To move up or down through the list one line at a time, press the up/down arrows keys or click the up/down triangle symbols (↑/↓) located on the OSD's right scroll bar.
  - To move up or down through the list one screen at a time, press the [PgUp] or [PgDn] key or click the up/down arrow symbols (↶/↷) located on the OSD's right scroll bar.
  - To activate a port, double-click its name in the list or highlight the name and then press [Enter].
  - Each action returns you to the menu one level above.

## 7 Specifications

Function	KH0116		
Computer Connections	Direct	16	
	Max.	512 (via Daisy Chain)	
Port Selection	Hotkey, OSD		
Connectors	Console Ports	Keyboard	1 x 6-pin Min Din Female (Purple)
		Video	1 x HDB-15 Female (Blue)
		Mouse	1 x 6-pin Min Din Female (Green)
	KVM Ports	16 x SPHD-15 Female (Yellow)	
		Daisy Chain Port	In
		Out	1 x DB-25 Male (Black)
	Firmware Upgrade	1 x RJ-11 Female (Black)	
Remote Console	1 x RJ-45 Female (Black)		
Power	1 x 3-Prong AC Socket		
Switches	Reset	1 x Semi-Recessed Pushbutton	
	Power	1 x Rocker	
	F/W Upgrade Recovery	1 x Slide	
	Remote Console	1 x Locking Pushbutton	
LEDs	On Line	16 (Green)	
	Selected	16 (Orange)	
	Power	1 (Blue)	
	Station ID	2 x 7 Segment (Orange)	
Emulation	Keyboard / Mouse	PS/2	
Video	2048 x 1536; DDC2B		
Scan Interval	1-255 Seconds		
I/P Rating	100-240 V AC; 50/60Hz; 1A		
Power Consumption	120V/8W ; 230V/8W (Max.)		
Environment	Operating Temp.	0-50°C	
	Storage Temp.	-20-60°C	
	Humidity	0-80% RH, Non-Condensing	
Physical Properties	Housing	Metal	
	Weight	3.56 kg	
	Dimensions (L x W x H)	43.70 x 21.00 x 4.40cm (19" / 1U)	

\* All specifications are subject to change without notice.