

1U 19" LED & Keyboard Control Console with Touch Pad Mouse

AW-19\*\* Series

User manual

### AW-19 Series

About this manual	3
Introduction	4
Overview	4
Features	5
Package contents	6
Equipment requirements	7
Specifications	8
Display diagrams	9
Installation	11
Hardware Installation	12
OSD function list	14
Single Switch Installation	17
Multiple Stage Installation	18
Operation	21
Hot Keys	21
Hot Key Commands Summary	24
OSD operation	25

### About this manual

### **Document Conventions**

This manual uses different formats to quickly identify information;

- [] " " Indicates keyboard selection. E.g., [Ctrl],"8" indicates you should press the control key followed by the numeral 8. Sequenced keys appear with a comma between them: [Ctrl], [Ctrl] Bulleted information
- Numbered lists designate sequenced instructions indicating important information.
   Italics Represents text given in reference or as example.

### Important information

Please have the following information ready beforehand:

Your current computer installation (operating system, configuration details, software etc.)

Error messages, reports or other information that may assist our staff.

### Introduction

Thank you for purchasing LED console KVM server management solution. Designed for IT professionals the 8 (AW-1908) and 16 (AW-1916) port AW series leverages the power of existing server networks with minimal intrusion. highly efficient it allows centralized access and control of up to 128/256 computers (via cascading) from an integrated 1U console drawer; with built-in 19" LED display, 8 /16 port KVM switch, keyboard and touchpad.

AW-KVM series is designed to deliver considerable return on investment; saving time money and valuable server room real estate, it can be rack mounted at any user-height. With a host of advanced features designed to protect your investment, the series includes; intelligent OSD (on screen display) menus, hot key switching, auto sensing of cascade computers, quick view scanning and firmware upgrades.

Whether it's in educational, government, or corporate sectors, the AW series provides network managers and it managers a stable management tool for consolidated server access and control.

### **Applications**

The AW-1908 / AW-1916 switch offers it managers and mis staff consolidated control of hundreds of computers via a single integrated console. Applications include:

- ISPs / IDCs
- · Test labs
- · Data centers & server firms

### Overview

### **OSD(On Screen Display)**

An intelligent menu system designed to easily access and control multiple servers.

### **Hot Keys**

Hot keys allow you to use designated key commands to switch computers. Control multiple computers using a simple hot key sequence from your keyboard.

#### **Manual Port Selectors**

Push button selectors allow for convenient manual PC selection.

#### **LED Bank Display**

The LED bank display shows bank identification when cascading..

#### **Quick View Scan**

The quick view scan function allows you to automatically scan and monitor all computers - one by one, that are connected to your AW KVM switch.

#### **Video Resolution**

The 19 "LED monitor supports 1280 x 1024 @75hz.

### **Port LED Display**

Port LEDs allow for easy status monitoring of all connected computers. a lit green LED indicates which computer the KVM console currently has control of. a red LED indicates which computer is connected but not in use.

### Sliding (1U) Console Drawer

The entire LED KVM console simply slides away into a compact 1U rack space when not in use.

#### **Features**

- Control 8 and up to 16 computers directly from a single ps/2 console •multi bank installation (cascaded) - control up to 128 / 256 computers respectively
- Allows users to control up to 8 (AW-1908) and up to 16 (AW-1916) computers directly from an integrated 1U console drawer
- Control up to 128 / 256 computers respectively via a cascade installation
- Convenient computer selection via intelligent on screen display (OSD)
   Menus, hot keys, or manual PC selectors
- · Auto-sensing of bank position on cascade installations
- · 7 segment LED display for bank identification when cascading
- · Quick view scan for monitoring connected computers
- Console's mouse port or touch pad can be easily used to control connected computers
- Password security lock access to connected servers
- · No software required for installation
- · Hot pluggable add / remove computers without powering down the switch
- Keyboard and mouse emulation intelligently manages booting via independent channel microprocessors
- Optional 17" / 19 " LED monitor supporting 1280 x 1024 @75hz (DDC, DDC2, DDC2B)
- 1U rack mountable at any user height in a (19") system rack console drawer simply slides away when not in use

#### **New Rackmount Advantages**

- · One person installation saves valuable human resources and time
- · Quick release rack-mount draw thumbscrews
- Adjustable rack slides for convenient positioning in 640~1140mm pattern depth

### **Package Contents**

Rackmount LED KVM drawer 1
Power adapter 1
Bracket 2
User manual 1

Combo cable 1 (only AW-1901)

Please check to make sure that each item of the above list is included in your AW package. Contact your dealer immediately if any item is missing or damaged in shipment.

### **Equipment Requirements**

#### **Cables**

It is highly recommended that you use only our KVM cable sets. these cables offer the highest quality possible to ensure optimal data transmission. our KVM cables feature micro-cable construction and are molded together for a neat and organized setup.

All-in-one KVM cable set includes an industry-standard, coaxial vga cable and nickel-plated connectors for high-resolution applications. the following cables are recommended for your AW KVM installation:

### Single Installation / Multiple Installations (cascaded);

KAB-102E(PS2 1,8m)
 KAB-103E(PS2 3m)
 KAB-103U (USB 1,8m)
 KAB-103U (USB 3m)
 KAB-105E(PS2 5m)
 KAB-105U (USB 5m)

### **Power Supply**

• An ac 100-240v 50-60Hz is recommended

### **Operating Systems**

 Windows® 98/Me/nt/2000//2003 server, Windows 7/8, freeBSD, Linux®, Novell® NetWare® 4.x/5.x

### Computers

- Keyboards 6 pin PS/2 Mini Din
- Mice 6 pin PS/2 Mini Din
- Monitors VGA ,SVGA, MultiSync® (DDC, DDC2, DDC2B)

# **Specifications**

	AW1908	AW1916	
Display Area(mm)	376.32mm (H) x 301.06mm (V) (19.0" diagonal)		
Pixel pitch	0.297(h) x 0.297(v)		
Number of pixels	1280(H) x 1024(V)		
Contrast ratio	(1000:1)		
Display color	16.7m		
Brightness(cd / m²)	300(CD/n²)		
Input signal	RGB analog		
Keyboard and key pad	106 key ps/2 keyboard with touch pad		
Power supply	Ac100-240v50-60hz		
LED on-screen display	Auto, Brightness, contrast, horizontal, vertical, color, OSDHP, OSDVP OSD time, language, recall, exit.		
Port selection	OSD/Hot key/Push button		
Computer port connector	HDDB15 Female(Keyboard, Mouse,VGA)		
Computer connections(direct)	8	16	
Computer connections (daisy chain)	128	256	
Port LEDs	8	16	
Port switch button	8	16	
Temperature	0 - 40 deg .C In operating ; -20-60 deg. C in storage		
Humidity	0- 80% RH, non-condensing		
Housing	Metal		
Size & weight	448 x 640x 44.25mm, 13,6/17,8kg	448 x 640 x 44.25 mm, 13,7/17,9kg	

Note.: Specifications Are subject to change without notice.

## **Display Diagrams**

### Front View



- 1. Console Drawer Handle
- 2. LED display (19")
- 3. LED display control (see the LED display guide for details)
- 4. Power switch
- 5. LED bank display
- 6. Touchpad
- Rack mounting brackets
- 8. 9.Manual Port selectors (1-8 / 1-16) Rear View



- DC input
   PC ports

### Installation

#### Where to Place the Switch

The enclosure of the AW switch is designed for standalone or rack-mount configuration. The switch is natively rack-mountable in a standard 1U (19") server rack. Rack-mount hardware is included with your switch for a sturdy rack installation.

### **Cautions and Warnings**

Avoid placing cables near machines that create electrical noise such as fluorescent lighting, air conditioning equipment, etc.

### **Important Information**

Before you begin, make sure that power to all the computers you will be connecting has been powered off.

To prevent damage to your installation due to ground potential difference, make sure that all computers on the installation are properly grounded. Failure to follow these instructions can result in damage to computers and / or the switch.

### Installing the Switch into a Server Rack

 Unlike other traditional rack mounted LED KVM units the AW series requires only one person for installation. The AW-Series includes 2 adjustable sliding rack mount brackets for installation in 19-inch rack systems. The sliding brackets feature adjustable positions from 640~1140mm pattern depth

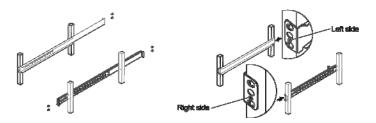
### **Important Information**

Installing and or removing the switch (module and chassis) improperly could void your warranty. If you are uncertain what to do please contact our technical support.

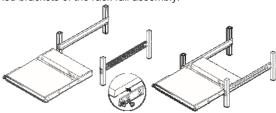
### Hardware Installation

### Please follow these simple steps to install the 19" LED drawer into a server rack:

- 1. Adjust the sliding rack mount brackets to match the depth of your server cabinet. Fix both brackets at a desired height to the server cabinet rails.
- ( note: the slider brackets are extendable to 640~1140mm pattern depth



2. Install hangers to both sides of front-end bracket. Gently slide the 19" LED drawer into the fixed brackets of the rack rail assembly.



3. Fasten the front-end bracket screws. Your 19" LED drawer is now ready for use; locate the handle, slide out the console and flip the LED cover.

( note: the front-end bracket screws must be fastened to properly secure the 19"LED drawer to the server rack.)



### **MENU FUNCTION**

#### **OSD Control Button**

1. ON/OFF: POWER On / Off

( When Powered on the LED will Light on)

2. + : During OSD display, moves curser up

**3. MENU**: Display OSD menu, as well as the "Select"key

**4.** — : During OSD display, moves curser down

5. EXIT : Exit Menu, Automatically adjust the clock,

phase, H-position and V-position

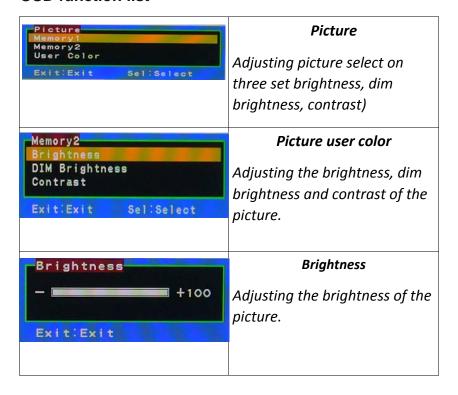


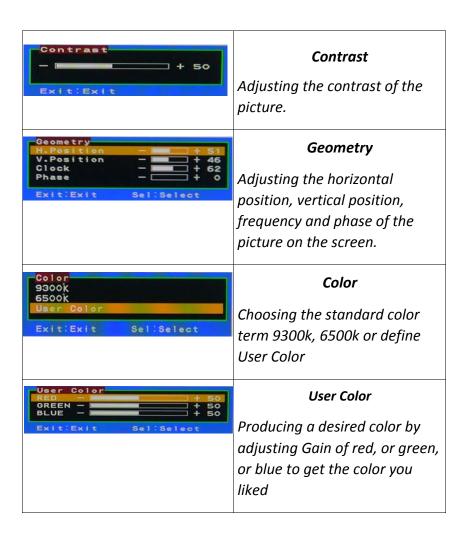
**MENU+ POWER :** Test color pattern (without input signal)

**OSD lock/unlock:** Press +/- simultaneously.



### **OSD** function list





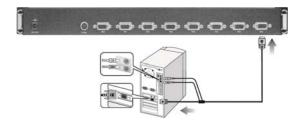


### **Single Switch Installation**

This section provides complete instructions for the hardware setup of a single AW-KVM switch in which there are no other KVM switches cascaded.

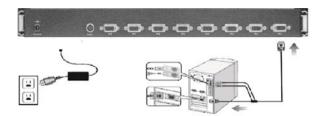
### **Connecting the Computers**

- 1. Power off all computers.
- Using all-in-one KVM Cable set (Part No. see page 7) take the male (HDDB-15pin) connector and plug it into the PC port indicated on the rear of the KVM Switch. Connect the other male VGA (HDDB-15) cable end to the VGA port of the computer you're installing.
- 3. Connect the PS/2 or USB keyboard and mouse connectors of the KVM cable set to the corresponding keyboard and mouse ports on the computer.
- Repeat step 1 and 2 for each additional computer you wish to connect.



### **Connecting the Power Supply**

- 1. Connect the power cord to the power jack on the rear of the Switch. Then plug the power cord into an available power outlet.
- 2. Power on the Switch's LED display.
- 3. Power on your computers.



### **Connecting your External Mouse**

Connect your external mouse to the mouse port located on the front panel of the AW KVM switch.

### **Multiple Stage Installation**

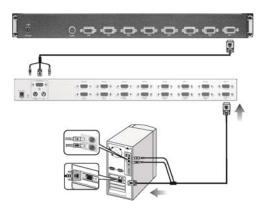
#### Cascading

This section provides complete instructions for the hardware setup of installing cascaded computers. to control even more computers, up to 8 (AW1908) and 16 (AW1916) additional switches can be cascade from the CPU ports of the first stage (master) switch. The cascaded switches that connect back to the first stage switch are referred to as second stage switches (or banks) and assigned a location. For example; the console keyboard, monitor and mouse connects to bank 00 or the "master" switch. As many as 128 / 256 computers can be control LED by a system administrator in a complete multi-bank installation.

#### To set up a multiple Stage Installation, do the following;

- 1. Power off all computers.
- Using the all-in-one KVM cable set (part no. see page 7) Take the male (hddb-15pin) connector and plug it into the pc1 port indicated on the rear of the KVM switch. Connect the other male VGA (HDDB-15) cable end to the console VGA port of the second stage switch.
- 3. Connect the ps/2 keyboard and mouse connectors of the KVM cable set to the second stage switch's console keyboard and mouse ports.
- 4. Using the all-in-one KVM Cable set (Part No. see page 7) take the male (HDDB-15pin) connector and plug it into the PC port indicated on the rear of the second stage switch (e.g. KVM-116LS). Connect

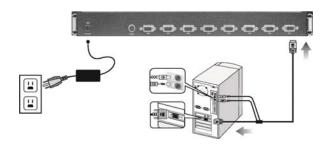
- the other male VGA (HDDB-15) cable end to the VGA port of the computer you're installing.
- 5. Connect the PS/2 or USB keyboard and mouse connectors of the KVM cable set to the corresponding keyboard and mouse ports on the computer.



Note: The above working diagram represents an KVM-116LS (16 port) KVM switch cascaded with the AW-1908 /1916 KVM switch.

### Connecting the Power Supply

- 1. Connect the power cord to the power jack on the rear of the AW KVM switch. Then plug the power cord into an available power outlet.
- 2. For all KVM switches attached, connect in turn, the "DC 12V, 4A—4.2A" power adapter to the power jack on the rear of each switch.
- 3. Power on all computers.
- 4. Perform a Manual Reset of the "Master" KVM switch by pressing the Port 1 and Port 2 manual push button selectors simultaneously for 2 seconds. all port LEDs of the "Master" switch will flash green for reset confirmation.



### **Confirmation Procedure**

Once all computers are powered on, the switch emulates both mouse and keyboard signals on each port allowing your computer to boot normally without errors.

To make sure your cascade installation was successful, do the following:

- 1. Press [SCROLL LOCK] twice and enter your 4 digit port ID code. For example: if cascading is successful, press [SCROLL LOCK], [SCROLL LOCK], "0101", then the monitor will show pc1's screen.
- 2. Check to see that the keyboard, monitor, and mouse are working normally.

Proceed to do this with all occupied ports to verify that all computers are connected and responding correctly. If you encounter an error, check your cable connections for that computer and reboot.

### Operation

Controlling your computers with the AW series couldn't be easier. The AW-Series allows you to access the computers using three simple methods:

- Hot keys
- · Manual selectors
- · OSD (on screen display) menu

#### **PC Manual Selectors**

You can select any computer or access any bank by using the PC selectors located at the top left of the console draw.

#### **Manual Selectors**

You can directly select any single computer or access any connected bank by using direct-access PC selectors located at the top left of the KVM console. Each port switch has a corresponding LED for easy status monitoring, a green LED indicates current port selection (selected). A Red LED light indicates a port is not selected but the connected computer is powered and ready (online). the AW series is also equipped with seven segment LED display for bank identification when cascading.

### **Hot Keys**

### Port Identification

Each computer in a AW installation has a specific port id. You can directly switch the KVM focus to any computer by entering the switch port number and the bank number (for cascaded installations). Each is assigned a two digit numeric ID.

#### **Single Switch Installation**

. The port number (x) is a two digit number that identifies the port on the AW KVM switch that the computer is connected to.

For example, a computer connected to port 8 has the numeric ID of 08.

### **Multiple Switch Installation (cascading)**

- . The port number (x) is a two digit number that identifies the port on the KVM switch that the computer is connected to.
- . The bank number (y) is a two digit number that identifies the switch's position in the cascade installation. (note: the bank number always precedes the port number.)

For example, a computer connected to port 8 of bank 6 has the numeric ID of: **0608** 

#### **Selecting the Active Port**

Directly switch the KVM focus to any computer by entering the port number and / or the BANK number.



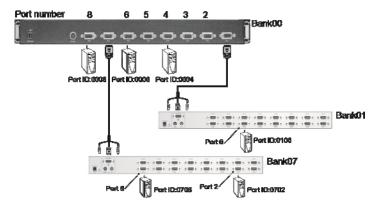
For example; to access a PC with the port ID 08:

Press [SCROLL LOCK], [SCROLL LOCK], "08".

To access a PC with the port ID 05:

Press [SCROLL LOCK], [SCROLL LOCK], "05".

Multiple switch installation cascade;



Note: the above working diagram represents an KVM-116LS 16 ports)KVM switch cascade with the AW-1908 / 1916 KVM switch.

For example: to access a PC with the port ID 0008:

Press [SCROLL LOCK], [SCROLL LOCK], "0008".

To access a PC with the port ID 0702:

Press [SCROLL LOCK], [SCROLL LOCK], "0702".

#### **Reset PC Name**

This function resets PC name settings to default values.

#### **Quick View Scan Mode**

The quick view scan feature allows you to monitor the activity of the connected computers at regular intervals so that you can monitor the computer activity without having to take the trouble of switching yourself. This time interval can be changed as desired.

**Note:** The interval between these two keys should be no more than 0.5 seconds. Once the scanning begins, it continues until you press any key to exit quick view scan mode. A port LED will flash indicating that the connected computer is under auto scan mode.

### **Setting the Quick View Scan Time**

The scan time or the time the switch spends on each port can be changed using either hot keys or OSD.

### Password Security - Locking Server Access

Administrators can set a unique password to restrict access to computers connected to the AW switch.

### **Changing Your Password**

To set a new password, do the following:

- 1. Invoke the hot key mode by pressing the **[SCROLL LOCK]** key twice within two seconds.
- 2. Key in [R]
- 3. Enter old password (up to 15 characters).

### ENTER PIN:

4. Enter the new password (up to 15 characters).

### NEW PIN:

5. Re-enter the new password for confirmation.

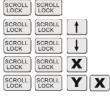
#### AGAIN PIN:

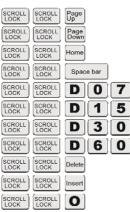
### **Hotkey Beeper Confirmation**

The beeper function can be turned on and off as desired using the following hotkey sequence:

### **Hot Key Commands Summary**

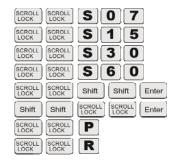
- On-Screen Port identification tag
- Previous active channel
- Next active channel
- Switch to port X (X = 01-16)
- Switch to port X on bank Y (Y = 00-16) (Cascading)
- Previous active bank
- Next active bank
- Switch to Master switch
- Enable OSD mode
- Set OSD display time; 7 sec
- Set OSD display time; 15 sec
- Set OSD display time; 30 sec
- Set OSD display time; 60 sec
- Reset OSD menu
- Reset PC name
- Quick view scan mode
- Stop Quick View Scan mode
- Turn on / off Beep confirmation (1 beep = on, 2 beeps = off)
- Set Quick View Scan time; 7 sec
- Set Quick View Scan time; 15 sec
- Set Quick View Scan time; 30 sec
- Set Quick View Scan time; 60 sec
- Set Alternative "Shift" Hot Key
- Set Default "SCROLL LOCK" Hot Key
- Set Password
- Change Password





### Any key





Note.:1.the [SCROLL LOCK] key must be pressed within 2 seconds.

- 2. The "Shift" key can be another hot key choice.
- 3.You will find that after the KVM unit switches to another computer, there is a mouse-keyboard delay of 1-2 seconds. this is normal and ensures re-synchronization of the console and connected computers.

### **OSD Operation**

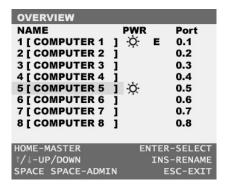
The on screen display (OSD) is an intelligent menu system designed to help administrators set up and easily access and control a multiple server installation. The menu driven interface consists of a main overview menu and an administrative sub-menu from which users can perform multiple tasks from naming servers to configuring operations.

The superimposed OSD overlay screen is generated by the switch and does not affect your computers or software in any way.

#### **OSD Overview Menu**

The main on screen display (OSD) menu can be accessed by doing the following:

Press the [scroll lock] key twice followed by the "Space bar".
 The OSD overlay screen appears.



Note: when hot plugging computer ports you must manually 'refresh' (exit and re-enter) the OSD menu to display the new status information of the corresponding port.

The OSD overview menu displays a list of connected computers, controls and function keys as well as symbols that refer to the status of each computer.

### **Navigation**

Use the following to navigate through the OSD menu:

- To escape from the OSD menu or sub-menu, press the [esc] key.
- To move up and down through the screen list use the up / down arrows.
- Move the highlight bar to the desired location and press [enter] to activate a port.

OSD heading	Description
NAME	Port or server name that is designated by the user. (see OSD functions in the next section under port naming).
PWR	The symbol indicates that the computer connected to that port is powered on. If a computer is connected and powered on, but the OSD menu does not display a symbol, reset the switch in order to re-detect the server. To reset the switch press the port 1 and port 2 manual push button selectors simultaneously for 2 seconds An e symbol displays when cascading computers.
PORT	Lists the port identification numbers for all connected servers. The 2 digits (read left-to-right) consist of the BANK and PORT number respectively. To gain access to a computer move the highlight bar over a server in the name list and hit [Enter].  To gain bank level access when cascading computers, move the highlight bar over a server in the name list and press [SCROLL LOCK] twice to display the BANK OSD.  For example; a cascaded KVM switch connected to the master switch Port 2 will show the preceding BANK numeral as '2'.

### **OSD Main Menu Functions**

This section provides details on the use of the following OSD functions; HOME-MASTER, UP/DOWN, SPACE-ADMIN, ENTER, INS and ESC.

From the main OSD mode, the following OSD functions can be accessed:

### **HOME-MASTER**

To return the KVM focus to the master switch's first active port press **[Home]**. from the keyboard.

### Up / Down

To select any computer at the same KVM stage, move the highlight bar using the **[Up]** / **[Down]** arrow keys and press **[Enter]**. (e.g. Bank 01 ports 01 to 16 / Bank 00 ports 01 to 16)

### Accessing computers using the OSD:

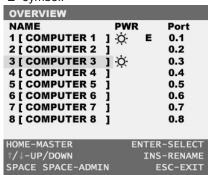
### To access computers of the Master Switch

- 1. Invoke the hot key mode by pressing the [SCROLL LOCK] key twice within two seconds.
- 2. Key in [SPACE]
- 3. Move the highlight bar between 1 and 8.
- 4. Press [enter] to gain access to the computer shown with a symbol. (Note: the OSD display will be dismissed after [ENTER] is pressed.)

OVERVIEW		
NAME	PWR	Port
1 [ COMPUTER 1	] -☆-	0.1
2 [ COMPUTER 2	1	0.2
3 [ COMPUTER 3	1	0.3
4 [ COMPUTER 4	ī	0.4
5 COMPUTER 5	1 ·X·	0.5
6 COMPUTER 6	1	0.6
7 COMPUTER 7	ī	0.7
8 COMPUTER 8	1	8.0
HOME-MASTER	ENT	TER-SELECT
↑/↓-UP/DOWN	†/↓-UP/DOWN INS-RENAME	
SPACE SPACE-ADMI	N	ESC-EXIT

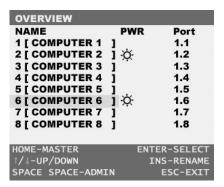
### To access computers of the Slave Switch

- 1. Invoke the hot key mode by pressing the [SCROLL LOCK] key twice within two seconds.
- 2. Key in [SPACE]
- 3. In the OSD of the Master Switch, move the highlight bar to the cascaded port shown with an "E" symbol.



According to the previous OSD, port 1 of the master switch is cascaded. In order to access the slave switch, move the highlight bar to port 1 and press [ENTER] to access the slave switch.

- 4. Press [SCROLL LOCK] key twice within two seconds.
- 5. Key in [SPACE].
- Move the highlight bar from 1 to 8 to select the desired computer and press ENTER.



Note:.The AW series is designed for 6 levels of cascading only.

### **Returning to the Master Switch Using OSD**

- Invoke the hot key mode by pressing the [SCROLL LOCK] key twice within two seconds.
- 2. Key in [SPACE]
- 3. Key in [HOME]

**Note:** After Switching back to the master switch, port 1 of the master switch is always the first to be shown.

#### **SPACE SPACE - ADMIN**

To access the administration sub-menu press [SPACE],[SPACE] from the main OSD menu. (see next section for details).

### **Enter**

To confirm a selection and save the content input press [ENTER].



### [ESC]

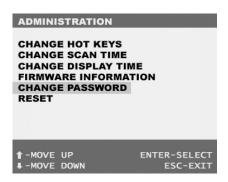
To exit the current OSD menu press [ESC].

### **OSD Administration Sub-Menu**

This section provides details on configuring default hot keys to setting up user password access.

To access the administration sub-menu complete the following:

1. Press **[SPACE]**, **[SPACE]** from the main OSD menu (see above). The OSD overlay screen appears.



OSD function	Description	
Change hot keys	Changes the default hot key option (scroll lock <-> Shift).	
Change scan time	Quick view scan allows users of large installations hands-free automatic scanning and viewing of all connected ports for a selected time interval. You may choose 7, 15, 30, or 60 seconds.	
Change display time	Changes the amount of time the OSD menu is displayed on-screen and also specifies the amount of time the port identification tag displays on-screen after making a port selection. You may choose 7, 15, 30, or 60 seconds.	
Firmware information	Indicates version and make of your AW KVM switch.	
Change password	Modify and/or delete user passwords.	
Reset	Resets OSD function settings to default values (server names designated by the administrator are Not affected). Perform an OSD reset when Daisy Chaining or when keyboard / mouse inactivity is experienced.  NOTE: pressing [SCROLL LOCK], [SCROLL LOCK], [Delete] will reset the OSD to its factory default settings.	

#### **FCC Certifications**

This equipment has been tested and found to comply with the limits for a class b digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not install LED and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- · Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.
- Shielded interface cables must be used in order to comply with emission limits.
- You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.
- This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

#### **CE Mark Warning**

This is a class b product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.