ATEN

Simply Better Connections

VM5404HA / VM5808HA

HDMI Matrix Switch with Scaler

User Manual

Compliance Statements

FEDERAL COMMUNICATIONS COMMISSION INTERFERENCE STATEMENT
This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

The 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.

FCC Caution
Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Warning
Operation of this equipment in a residential environment could cause radio interference.

Achtung
Der Gebrauch dieses Geräts in Wohnumgebung kann Funkstörungen verursachen.

KCC Statement

유선 제품용 / A 급 기기 (업무용 방송 통신 기기)
이 기기는 업무용 (A 급) 전자파적합기기로서 판매자 또는 사용자는 이 점을 주의하시기 바라며 , 가정 외의 지역에서 사용하는 것을 목적으로 합니다 .

Industry Canada Statement

This Class A digital apparatus complies with Canadian ICES-003.

CAN ICES-003 (A) / NMB-003 (A)

HDMI Trademark Statement

The terms HDMI, HDMI High-Definition Multimedia Interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing Administrator, Inc.

HDMI™
HIGH-DEFINITION MULTIMEDIA INTERFACE

VCCI Statement

この装置は、クラスA機器です。この装置を住宅環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。　　　　　　　　　　　VCCI－A

RoHS

This product is RoHS compliant.

User Information

Online Registration

Be sure to register your product at our online support center:

International	http://eservice.aten.com

Telephone Support

For telephone support, call this number:

International	886-2-8692-6959
China	86-400-810-0-810
Japan	81-3-5615-5811
Korea	82-2-467-6789
North America	1-888-999-ATEN ext 4988
	1-949-428-1111

User Notice

All information, documentation, and specifications contained in this manual are subject to change without prior notification by the manufacturer. The manufacturer makes no representations or warranties, either expressed or implied, with respect to the contents hereof and specifically disclaims any warranties as to merchantability or fitness for any particular purpose. Any of the manufacturer's software described in this manual is sold or licensed *as is*. Should the programs prove defective following their purchase, the buyer (and not the manufacturer, its distributor, or its dealer), assumes the entire cost of all necessary servicing, repair and any incidental or consequential damages resulting from any defect in the software.

The manufacturer of this system is not responsible for any radio and/or TV interference caused by unauthorized modifications to this device. It is the responsibility of the user to correct such interference.

The manufacturer is not responsible for any damage incurred in the operation of this system if the correct operational voltage setting was not selected prior to operation. PLEASE VERIFY THAT THE VOLTAGE SETTING IS CORRECT BEFORE USE.

Product Information

For information about all ATEN products and how they can help you connect without limits, visit ATEN on the Web or contact an ATEN Authorized Reseller. Visit ATEN on the Web for a list of locations and telephone numbers:

International	http://www.aten.com
North America	http://www.aten-usa.com

Package Contents

Check to make sure that all the components are in working order. If you encounter any problem, please contact your dealer.

The VM5404HA / VM5808HA package consists of:

- 1 VM5404HA / VM5808HA HDMI Matrix Switch with Scaler
- 1 power cord
- 1 mounting kit
- 1 user instructions

Contents

5. CLI Commands

About this Manual

This User Manual is provided to help you get the most from your VM5404HA / VM5808HA system. It covers all aspects of installation, configuration and operation. An overview of the information found in the manual is provided below.

Chapter 1 Introduction, introduces you to the VM5404HA / VM5808HA system. Its purpose, features and benefits are presented, and its front and back panel components are described.

Chapter 2 Hardware Setup, describes how to set up your VM5404HA / VM5808HA installation.

Chapter 3 Front Panel Configuration, explains the fundamental concepts involved in operating the VM5404HA / VM5808HA at the local site via the front panel LCD display using pushbuttons.

Chapter 4 Browser Operation, provides a complete description of the VM5404HA / VM5808HA's Browser Graphical User Interface (GUI), and how to use it to remotely configure and operate the VM5404HA / VM5808HA.

Chapter 5 CLI Commands, provides a complete list of the serial control protocol commands used when utilizing the RS-232 Serial Port so that an extra source device can be utilized in the installation.

Appendix, which provides specifications and other technical information regarding the VM5404HA / VM5808HA.

Note:

◆ Read this manual thoroughly and follow the installation and operation procedures carefully to prevent any damage to the unit or any connected devices.

◆ The product may be updated, with features and functions added, improved or removed since the release of this manual. For an up-to-date user manual, visit http://www.aten.com/global/en

Conventions

This manual uses the following conventions:

Monospaced	Indicates text that you should key in.
[ ]	Indicates keys you should press. For example, [Enter] means to press the **Enter** key. If keys need to be chorded, they appear together in the same bracket with a plus sign between them: [Ctrl+Alt].
1.	Numbered lists represent procedures with sequential steps.
♦	Bullet lists provide information, but do not involve sequential steps.
>	Indicates selecting the option (on a menu or dialog box, for example), that comes next. For example, Start > Run means to open the *Start* menu, and then select *Run*.
⚠	Indicates critical information.

Terminology

Terminology	Description
matrix switch	Refers to the VM5404HA and VM5808HA collectively.

This Page Intentionally Left Blank

Chapter 1
Introduction

Overview

The ATEN VM5404HA / VM5808HA HDMI Matrix Switch is a versatile solution that provides an easy way to route high definition video and audio from any of 4/8 HDMI sources to any of 4/8 HDMI displays at the same time. As a Matrix Switch, each input can be independently connected to any or all outputs, giving you the ultimate in flexibility and control in any multi-display audio/video installation.

The VM5404HA / VM5808HA features Seamless Switch™, which employs FPGA matrix system architecture to seamlessly switch between multiple sources and multiple displays. With EDID Expert technology, the VM5404HA / VM5808HA selects the optimum EDID settings for smooth power-up and the highest quality display. It also features a high-performing scaling engine that converts the video resolution into the display's native resolution to give you the best image quality.

You can easily configure the VM5404HA / VM5808HA via the front panel LCD display and pushbuttons. The LCD provides a quick view of all port connections, and lets operators access the unit's built-in configuration utility.

Furthermore, the VM5404HA / VM5808HA allows convenient configuration and operation via an intuitive Graphical User Interface (GUI) using any web browser. The web GUI provides you with advanced features which include easy setup of custom Video Wall and Digital Signage configurations that can be saved and recalled. Because your VM5404HA / VM5808HA can be controlled over a standard TCP/IP connection, it conveniently integrates into any existing network for easy remote access. For complete system and install integration, serial control is standard through the VM5404HA / VM5808HA's built-in RS-232 port that allows the switch to be controlled through a high-end controller or PC. You can also have mobile access to frequently used features such as switching of profile and AV inputs using the Video Matrix Control App. For more information, see *Video Matrix Control App User Manual*.

The VM5404HA / VM5808HA is an ideal solution for applications that require HDMI outputs from multiple sources to be conveniently delivered to multiple destinations, such as for stage presentations, competitions, control centers, and system installations that require real-time reports.

Features

- Routes any of the 4 / 8 HDMI sources to any of the 4 / 8 HDMI displays
- Local HDMI output – enables previewing of up to 4 / 8 video sources in a multi-view window
- Multiple system configuration methods – front panel pushbuttons, RS-232 commands, Ethernet (Telnet / Web GUI) connection, ATEN Video Matrix Control app, and ATEN Control System
- Device status can be viewed and controlled via ATEN Video Matrix Control App
- Video Wall – allows for customization of up to 8 / 16 layouts for any type of video walls via intuitive web console*
- Built-in scaler – automatically converts input resolutions for optimal appearance on the display
- FrameSync – prevents image tearing by synchronizing the scaler output frame rate to the input signal frame rate
- ATEN Seamless Switch technology* – adopts FPGA to unify video formats so as to provide continuous video streams, real-time switching, and stable signal transmission
- EDID Expert – selects optimum EDID settings for smooth power-up, high-quality display, and use of the best resolution across different screens
- Audio enabled; HDMI audio can be extracted to stereo audio
- HDMI (3D, Deep color); HDCP 1.4
- Supports Dolby True HD and DTS HD Master audio
- Supports Consumer Electronics Control (CEC)
- ESD protection for HDMI
- Firmware upgradeable
- Rack mountable (1U design)

> **Note:** 1. When Seamless Switch™ is enabled, mind the following: Video output will not display 3D, Deep Color or interlace (i.e., 1080i) resolutions correctly. To use these features, make sure to first disable Seamless Switch™.
>
> 2. When Seamless Switch™ or Video Wall is enabled, videos may not display within range. In this case, make sure to adjust the display settings on your device.
>
> 3. For more information on the Video Matrix Control app, see *video Matrix Control App User Manual*.

Requirements

The following devices are required for a complete VM5404HA / VM5808HA installation:

Source Devices

◆ Computer or A/V source device with HDMI Type-A output connector(s)

Note: A DVI/HDMI adapter is required when connecting a DVI source device.

Display Devices

◆ Display devices or receivers with an HDMI Type-A input connector

Cables

◆ 1 HDMI cable for each source device you will be connecting
◆ 1 HDMI cable for each display device you will be connecting
◆ 1 Cat 5e cable
◆ 1 RS-232 serial cable

Note: No cables are included in this package. We strongly recommend that you purchase high-quality cables of appropriate length since this will affect the quality of the audio and video display. Contact your dealer to purchase the correct cable sets.
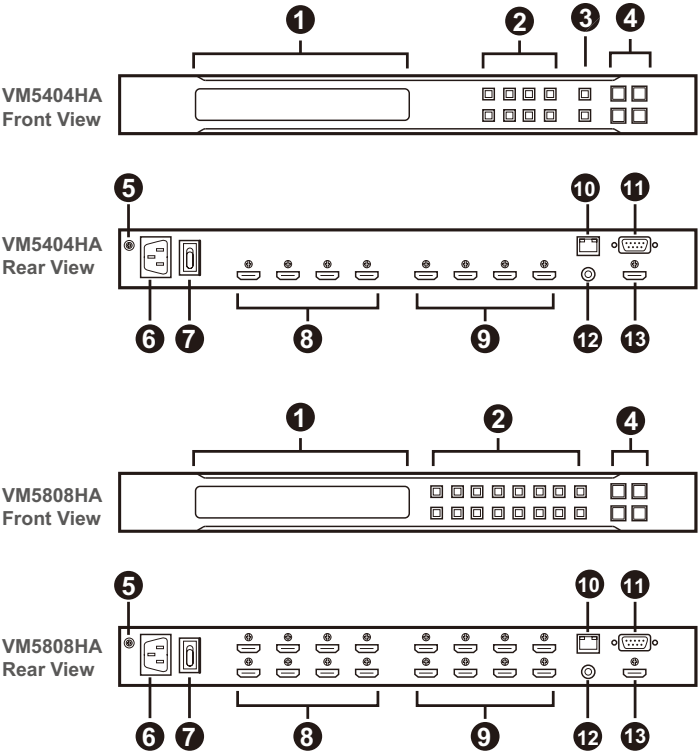
Supported Browsers

Use the recommended web browsers below to access the VM5404HA / VM5808HA's web console.

OS	Java Version	Browser	Version
Windows 10_1903 x64	1.8.0_201 x64	Edge	44.18362.1.0
		Firefox	68.0 x64
		Chrome	75.0.3770.100 x64
		Opera	62.0.3331.43 x64
Windows 8.1 x32	1.8.0_201	IE	11
Windows 2019_1809 DataCenter x64	1.8.0_201 x64	IE	11 x64
Windows 2016 x64	1.8.0_201 x64	IE	11 x64
Windows 7 SP1 x64	1.8.0_201 x64	IE	11 x64
CentOS 7.5 x64 Kernel 4.18.11-1	1.8.0_201 x64	Firefox	60.7.2-1 x64
Ubuntu 18.04 x64 Kernel 4.19.041900rc3	1.8.0_201 x64	Chrome	75.0.3770.100-1 x64
Solaris 11.4 x64 5.11	1.8.0.181 x64	Firefox	52.9.0 x32
MAC 11.4	-	Safari	8
Windows 10 x64	1.8.0_201 x64	QQ	10.4.3587.400.
Windows 10 x64	1.8.0_201 x64	360	10.0.1508.0

Components

No.	Component	Description
1	LCD display	The LCD display gives a quick view of all port connections, and shows the various options for configuring and operating the matrix switch. For full details, see *Main Screen*, page 11.
2	port selection pushbuttons	◆ Press a pushbutton to select the corresponding HDMI input or output. The built-in LEDs light when the port is selected. ◆ When selecting a connection profile, press input pushbutton 1–4 to select profile 1–4; output pushbutton to select profile 5–8. Pushbuttons
3	Prev / Next pushbuttons	These pushbuttons allow you to cycle through the menu options on the LCD display.

No.	Component	Description
4	function pushbuttons	The function pushbuttons (**MENU**, **PROFILE**, **ENTER** and **CANCEL**) are for navigating the LCD built-in configuration utility. For full details, see *Front Panel Pushbuttons*, **page 9**. **Note:** The **MENU** and **PROFILE** front panel pushbuttons have built-in LEDs that light to indicate they have been selected.
5	grounding terminal	Use a grounding wire to ground the unit by connecting one end to the grounding terminal, and the other end to a suitable grounded object.
6	power socket	This is a standard 3-pin AC power socket. The power cord from an AC source plugs in here.
7	power switch	This is a standard rocker switch that powers the unit on and off.
8	HDMI output ports	The cables from your HDMI display devices plug into these ports.
9	HDMI input ports	The cables from your HDMI source devices plug into these ports.
10	Ethernet port	In order to access the VM5404HA's Browser Graphical User Interface (GUI), the VM5404HA must be connected to your network. The cable that connects the VM5404HA to your LAN plugs in here. See *Installation*, page 8, for further details
11	RS-232 serial port	Connect a computer or high-end system controller via this serial port.
12	audio out port	To extract and play audio from one of the connected input sources, connect a speaker to this port.
13	local HDMI out port	To preview video inputs in a multi-view screen, connect a display to this port.

<div align="right">

Chapter 2
Hardware Setup

</div>

⚠️ 1. Important safety information regarding the placement of this device is provided on page 107. Please review it before proceeding.

2. Make sure that the power to all devices connected to the installation are turned off. You must unplug the power cords of any computers that have the Keyboard Power On function.

Rack Mounting

The VM5404HA / VM5808HA can be mounted in a 19" (1U) system rack. For the most convenient front panel pushbutton configuration and operation at the local site, mount the unit at the front of the rack, as follows:

1. Use the M3 x 8 Phillips head hex screws supplied with the mounting kit to screw the rack mount brackets onto the front of the unit.

Phillips Head Hex
M3 x 8
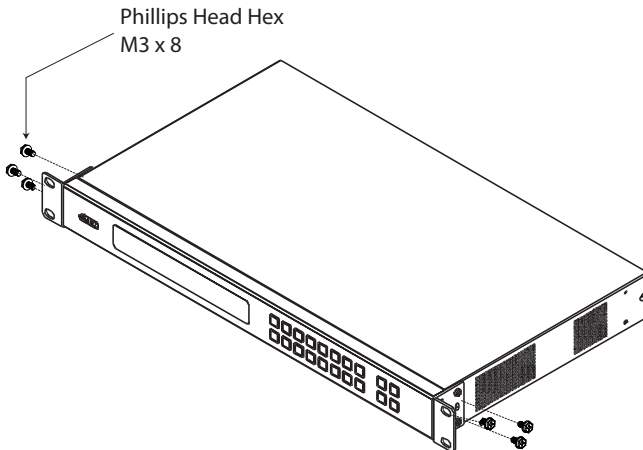
2. Position the unit in the front of the rack and align the holes in the rack mount brackets with the holes in the rack.

3. Screw the rack mount brackets to the rack.

Installation
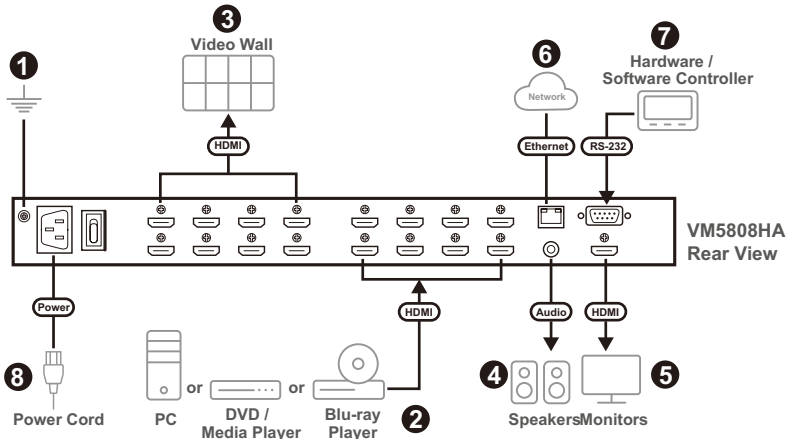
1. Use a grounding wire to ground the unit by connecting one end of the wire to the grounding terminal, and the other end of the wire to a suitable grounded object.

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

2. Connect up to 4 (VM5404HA) or 8 (VM5808HA) HDMI video sources to the **HDMI input** ports

3. Connect up to 4 (VM5404HA) or 8 (VM5808HA) HDMI display devices to the **HDMI output** ports

4. To extract audio from one of the connected input sources, connect a speaker to the audio out port.

5. To preview video inputs in a multiview screen, connect a display to the local HDMI out port.

6. To access the unit's settings via the web interface, connect the unit to a network switch via the LAN port with an Ethernet cable.

7. To operate the unit via RS-232 commands, connect a hardware/software controller to the unit.

8. Plug a power cord to the unit and then put the power switch to **ON**.

9. Make sure all the connected devices are properly grounded to prevent damages from power surges or static electricity before powering these devices.

Chapter 3
Front Panel Configuration

Overview

The VM5404HA / VM5808HA can be configured and operated locally via the front panel LCD and pushbuttons; remotely over a standard TCP/IP connection via graphical user interface (GUI) using a web browser; via a remote terminal session using Telnet; or by a RS-232 serial controller.

The local front panel operation is discussed in this chapter. Web GUI Operation is discussed in Chapter 4, and RS-232 serial control is discussed in Chapter 5.

Front Panel Pushbuttons

The front panel features an LCD display and pushbuttons for convenient operation locally. This allows users to perform operations such as selecting which source shows on which display, viewing the IP settings, configuring the serial port, setting the EDID Mode / CEC / OSD /Output Status, selecting security settings, and loading/saving profiles.

Note the following front panel pushbutton functions:

- Use the **MENU** pushbutton to access the Menu page options: IP Setting, Serial Port Setting, Operation Mode, Security Mode, and Save to a Profile (see *LCD Menu Organization*, page 14).

- Use the **PROFILE** pushbutton to switch between the connection profiles which have been added to the Profile List (see *Profile List*, page 31). Pressing this pushbutton for longer than 3 seconds displays the Save to a Profile page (see *Save to a Profile*, page 26).

- Use the **CANCEL** pushbutton to go back to a previous page, return to the Main Screen, stop or exit an operation.

- Use the **ENTER** pushbutton to select options and confirm operations.

- Use the **INPUT / OUTPUT** (**1–8**) or **(1-4)** pushbuttons to select the Input/Output port. These pushbuttons may also correspond to menu options, connection profiles, and so on.

- Use the 7/8 or Prev/Next pushbuttons to navigate the menus.

Enter Password

Upon VM5404HA / VM5808HA startup, check the front panel LCD to view the loading progress. If the Password screen / LCD Menu fails to load, an error message displays. Reset the unit and try again.

If you are accessing the VM5404HA / VM5808HA for the first time, the Password screen appears as soon as the LCD loading process is done. Enter the default password **1234** to continue to the Main Screen (see *Main Screen*, page 11).

Additionally, the Password Screen appears if the VM5404HA / VM5808HA has been configured to require a password for Front Panel operation (see *Security Mode*, page 24).

To enter a password, do the following:

1. In the **Enter Password** field, check that the cursor is at the first asterisk (*) and flashing.

2. Use the front panel Input Port pushbuttons (1–8) or (1–4) to enter the 4-digit password. After the fourth digit has been entered correctly, the Main Screen displays.

3. Press **Cancel** to clear the password. The digits revert to 4 asterisks and the cursor goes back to the first asterisk.

> **Note:**
> ◆ The VM5404HA / VM5808HA password can be any four digit combination between 1111 to 8888 (VM5808HA) or 1111 to 4444 (VM5404HA). The default password is 1234.
>
> ◆ If you enter an incorrect password, the cursor goes back to the first digit and reverts to flashing. The Incorrect Password message displays at the bottom of the screen, but clears as soon as a new password is entered.
>
> ◆ If Password option is Enabled (see *Security Mode*, page 24), the LCD display time-out is 5 minutes by default.

Main Screen

The Main Screen shows the Input ports in the top row, which are tied to the Output ports shown in sequential order (1–8) or (1–4) at the bottom row.
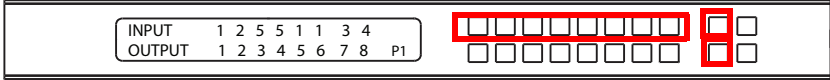
- ◆ The front panel pushbutton label (1–8) or (1–4) corresponds to the **Input** ports and **Output** ports on the unit's rear panel.

- ◆ Use the **Menu** pushbutton to view the LCD Menu (see *LCD Menu Organization*, page 14).

- ◆ Use the **Profile** pushbutton to switch between profile connections (see *Profile List*, page 31).

Port Switching

From the Main Screen, users can configure the input-to-output port connections to associate an input source device to an output display.
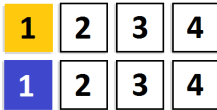
Input Port Selection

Configure the input-to-output assignment by selecting an input port first.

1. Press any Input port pushbutton (1–8) or (1-4). The Output port LED(s) tied to the said Input port light up.

   In the example below, pressing Input port **1** shows it is tied to Output ports **1** and **2**.

2. To disconnect an Output port from an Input port, press the corresponding Output port pushbutton. The output port pushbutton dims.

In the example below, Output port **2** has been disconnected from Input port **1**.

| 1 | 2 | 3 | 4 |
| 1 | 2 | 3 | 4 |

3. To switch to another Input port, press any Input port pushbutton. The Output port LED(s) tied to the said Input port light up.

   In the example below, pressing Input port **2** shows it is tied to Output ports **3** and **4**.

| 1 | 2 | 3 | 4 |
| 1 | 2 | 3 | 4 |

4. To connect Output port **2** to Input port **2** in the example above, then press the Output port **2** pushbutton. The Output port 2 pushbutton lights up. This indicates that Input port **2** is now connected to Output ports **2**, **3** and **4**.

| 1 | 2 | 3 | 4 |
| 1 | 2 | 3 | 4 |

Once the signal from the selected Input port is successfully tied to the Output port, the LEDs turn off and the LCD information is updated.

Note:

- Pressing an Input port a second time deselects it. Input ports that are not tied to any output port are not indicated in the LCD screen.

- Pressing the **Cancel** pushbutton once to stop the input assignment and all the pushbutton LEDs are turned off.

- After 10 seconds of inactivity, all the LEDs turn off.

Output Port Selection

Configure the input-to-output assignment by selecting the output port(s) first.

1. Press any Output port pushbutton (1–8) or (1–4) to select an output port. The LEDs of the output port and its assigned input port light up.

2. Optionally select more output ports if you want to assign the same input source to these output ports.

3. Press an input port pushbutton to assign the input to the selected output ports. For example, input source 1 has been assigned to output ports 1, 2, 3, and 4.
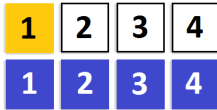
Note:

- Pressing an Output port a second time deselects it.

- Pressing the **Cancel** pushbutton once stops the Output Port Selection operation, and the LCD displays the active setting. Pressing the **Cancel** pushbutton again turns all LEDs off.

- After 10 seconds of inactivity, all the LEDs turn off.

LCD Menu Organization

The VM5404HA / VM5808HA has a built-in configuration utility via the front panel LCD, which can be controlled by pressing the **MENU** and front panel Input pushbuttons (1–8) or (1–4). User can cycle through the menu options, starting from IP Setting page, in the order shown in the table below:

Menu Page	Sub-Menu Page(s)		
IP Setting	IP Address		
	Subnet Mask		
	Gateway		
Serial Port Setting	Baud Rate	9600 / **19200** / 38400 / 115200	
Operation Mode	EDID	**Default** / Port1 / Remix / Customized	
	CEC	On / **NA**	
	OSD	**On** / NA	
	Output Status	Video	**On** / NA
		Audio Extract Mute	**01** - 04 (VM5404HA) **01** - 08 (VM5808HA) On / **NA**
		Output Resolution	01-04 (VM5404HA); 01-08 (VM5808HA)
	Array Mode (HDMI Out)	Moded	Single / Side by Side / Quad View / Show All / Manual
		Selected Input(s)	01 - 04 (VM5404HA) 01 - 08 (VM5808HA)
Security Mode	Mode	**None**	
		Password Enable	
		Lock Screen	
	Change Password	Old Password	New Password
Save to a Profile	Save to a Profile No.	01–08 (VM5404HA); 01-16 (VM5808HA)	
Play/Stop the Profile Schedule			
Turn Video Wall Off			

Note: The highlighted values are the default settings of the VM5404HA / VM5808HA.

Menu Pushbutton

Use the MENU pushbutton to access configuration settings of the video matrix.When the Menu is active, the MENU pushbutton's built-in LED lights up:

```
1: IP Setting
2: Serial Port Setting      8: Next  ▼
```

From the Menu page:

* Press **1** to go to the IP Setting page (see *IP Setting*, page 15)

* Press **2** to go to the Serial Port Setting page (see *Serial Port Setting*, page 17)

* Press **8** or **Next** to go to the next page(s) for the sub-menu pages

* Press **Menu** or **Cancel** to return to the Main Screen

IP Setting

The IP Setting page displays the VM5404HA / VM5808HA's IP configuration. The values in the LCD Menu are read-only and can be configured via the Browser GUI (*Network Settings*, page 81).

IP Address / Subnet Mask

To view the VM5404HA / VM5808HA's IP address and Subnet Mask, do the following:

1. From the Menu page, press **1** to see the IP Setting submenu. The IP address and Subnet Mask are then shown.

```
IP Address: 192.168.0.60
Subnet Mask: 255.255.255.0    8: Next  ▼
```

Note: The VM5404HA / VM5808HA default IP address is 192.168.0.60. The default Subnet Mask is 255.255.255.0

2. Press **8** or **Next** to go to the next page.

3. Press **Menu** or **Cancel** to return to the Menu page.Press **Cancel** to return to the previous level of menu.

Gateway

To view the VM5404HA / VM5808HA's gateway address, do the following:

1. From the Menu page, press **1** to see the IP Setting submenu, then press **8** or **Next** to get to the next page. The gateway address displays.

Gateway: 192.168.0.1   7: Back   ▲

Note: The default Gateway is 192.168.0.1.

2. Press **7** or **Prev** to go to the previous page.

3. Press **Menu** to return to the Menu page.

4. Press **Cancel** to return to the previous level of menu.

Serial Port Setting

To configure the VM5404HA / VM5808HA's baud rate for its serial port connection, do the following:

1. From the Menu page, select **Serial Port Setting**.

2. Select **Baud Rate Setting** from the Serial Port Setting submenu by pressing **1**:

3. Press pushbuttons 1–4 to make your selection.

   Baud Rate options are:

   - **1:** 9600
   - **2**: 19200
   - **3**: 38400
   - **4**: 115200

   Note: The default baud rate is 19200.

4. Press **Menu** to return to the Menu page.Press **Cancel** to return to the previous level of menu.

Operation Mode

The EDID Mode, CEC, OSD, Output Status, and array mode features can be configured from the Operation Mode page.

- ◆ EDID (Extended Display Identification Data) is used to have the VM5404HA / VM5808HA automatically apply a preset video configuration or EDID Mode, which utilizes the best resolution across different monitors

- ◆ Consumer Electronics Control (CEC) allows interconnected HDMI devices to communicate and respond to one remote control

- ◆ The OSD, when enabled for a port, lets an attached display/monitor show real-time port switching information

- ◆ The Output Status shows whether the video/audio of an Output port is turned on or off and allows viewing and setting of the Output Resolution

To configure the VM5404HA / VM5808HA's operation mode settings from the Main Screen, use the **Menu** pushbutton to access the Menu page, press **8** or **Next** to navigate to the next page, then press pushbutton **1** to access the Operation Mode page.

EDID Mode
To configure the EDID Mode, do the following:

1. From the Operation Mode page, press pushbutton **1**:

(Continues on next page.)

2. Press pushbuttons 1–4 to make your selection.

1: Port 1	3: Remix
2: Default (In use)	4: Customized

EDID Mode options are:

EDID Option	Description
1: Port1	The EDID from port1 is passed to all video sources.
2: Default	The default EDID is passed to all video sources.
3: Remix	Uses the EDID of each connected display according to its connection when the VM5404HA / VM5808HA is first powered on, or immediately after pressing 3 to select the Remix option.
4: Customized	Automatically retrieves and saves the EDID settings of a connected monitor/display device to an input source port. This can be configured using the Browser GUI. See *Customized EDID Parameters*, page 62.

3. Press **Menu** to return to the Menu page.Press **Cancel** to return to the previous level of menu.

CEC

To configure the CEC setting, do the following:

1. From the Operation Mode page, press pushbutton **2**:

1: EDID Mode	
2: CEC	8: Next ▼

2. Press pushbuttons (1–8) or (1–4) to enable (**ON**) or disable (**NA**) the CEC feature for the output port. If the port does not support CEC, an **NA** is shown.

OUTPUT	1	2	3	4	5	6	7	8
	NA	ON	ON	NA	ON	NA	ON	NA

Note: The default CEC setting is NA.

3. Press **Menu** to return to the Menu page.Press **Cancel** to return to the previous level of menu.

OSD

The On-Screen Display or OSD feature enables real-time text updates to appear on the display device's screen for any configuration changes made to the Output port via the VM5404HA / VM5808HA's front panel or Browser GUI.

To configure the OSD setting for each output port, do the following:

1. From the Operation Mode page, press **8** or **Next** to go to the next page, then press pushbutton **1**:

```
1: OSD                    7: Back    ▲
2: Output Status
```

2. From the Output Status page, press pushbutton **1**:

```
1: Video
2: Audio Extract: 1
```

3. Press pushbuttons (1–8) or (1–4) to enable (**ON**) or disable (**NA**) the OSD feature for the output port.

```
OUTPUT  1   2   3   4   5   6   7   8
       ON  ON  ON  NA  ON  NA  ON  NA
```
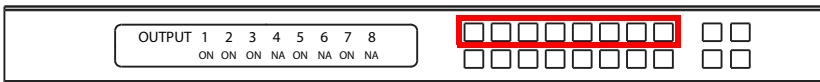
   Note: The default OSD setting is On.

4. Press **Menu** to return to the Menu page.Press **Cancel** to return to the previous level of menu.

Output Status

You can configure the output settings for each output port, such as enabling/disabling displays, select an input to extra its audio, and changing the output resolutions.

Enabling/Disabling Displays

1. From the Operation Mode page, press **8** or **Next** to go to the next page, then press pushbutton **2**:

```
1: OSD                    7: Back    ▲
2: Output Status
```

2. From the Output Status page, press **1** to select Video.

3. Press pushbuttons (1–8) or (1–4) to enable (**ON**) or disable (**NA**) the video/audio of the output port.

```
OUTPUT  1  2  3  4  5  6  7  8
        ON ON ON NA ON NA ON NA
```

Note: The default Output Status setting is On.

4. Press **Menu** to return to the Menu page. Press **Cancel** to return to the previous level of menu.

Selecting an Input for Audio Extract

1. From the Operation Mode page, press **8** or **Next** to go to the next page, and then press pushbutton **2**:

```
1: OSD                    7: Back    ▲
2: Output Status
```

2. From the Output Status page, press **2** to select Audio Extract. The number at the end of this option indicates the current setting, input port 1 for the audio extraction.

```
1: Video
2: Audio Extract: 1
```

3. Press an input pushbutton to select an input source for audio extraction.

```
Audio Input: 1
Mute: NA              Profile: Mute
```
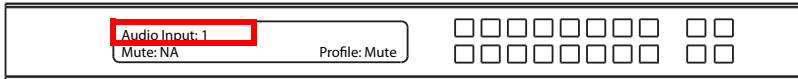
Muting/Unmuting a Profile

1. From the Operation Mode page, press **8** or **Next** to go to the next page, and then press pushbutton **2**:

```
1: OSD                7: Back    ▲
2: Output Status
```

2. From the Output Status page, press **2** to select Audio Extract.

```
1: Video
2: Audio Extract: 1
```

3. Press the Profile pushbutton to mute or unmute.

```
Audio Input: 1
Mute: NA              Profile: Mute
```
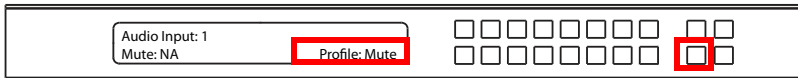
Changing the Display Resolution

To configure the Output Resolution settings for each output port, do the following:

1. From the Operation Mode page, press **8** or **Next** to go to the next page, then press pushbutton **2**:

```
1: OSD                7: Back    ▲
2: Output Status
```

2. From the Output Status page, press **8** or **Next** to locate the Output Resolution option, and then press **1**.

```
1: Output Resolution
```
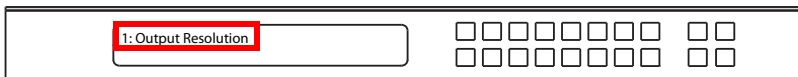
3. Press pushbuttons (1–8) or (1–4) to select an output port whose resolution will be changed.
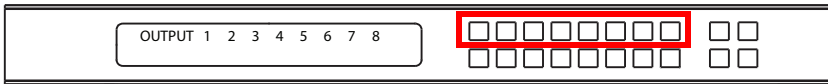
4. Use the input port pushbuttons **7/8** or **Prev**/**Next** to navigate through the list of options, and then press the corresponding input port pushbutton to select the setting.

5. Press **Menu** to return to the Menu page.

6. Press **Cancel** to return to the previous level of menu.

Array Mode (Local HDMI Out)

Changing the View Mode for Local Display

1. From the Operation Mode page, press **8** or **Next** to locate the Array Mode option, and then press pushbutton **1** to select the option.

2. Press **1** to select mode.

3. Press the input port pushbutton **7/8** or the **Prev**/**Next** pushbutton to navigate through the mode options, and then press an input port pushbutton to select one.

Changing the Input Source(s) for Local Display

1. From the Operation Mode page, press **8** or **Next** to locate the Array Mode option, and then press pushbutton **1** to select the option.

2. Press **2** to select input ports for the local display.

3. Select up to 4 input ports by pressing the input port pushbuttons.

Security Mode

The Security Mode page allows users to manage the VM5404HA / VM5808HA's security-related settings. Three security modes are available: None, Password Enable and Lock Screen. The VM5404HA / VM5808HA's password can also be changed here.

To configure the VM5404HA / VM5808HA's security settings from the Main Screen, use the **Menu** pushbutton to access the Menu page, press **8** or **Next** to navigate to the next page, then press pushbutton **2** to access the Security Mode page.

Mode

1. To change the VM5404HA / VM5808HA's security mode, press pushbutton **1** in Security Mode.

2. In the Mode menu, to disable security settings, press pushbutton **1**. To require a password after the LCD display times out or is powered off/on, press pushbutton **2**, and then type a four-digit number as the password

Note: If Password is Enabled, the LCD display's default time-out is 5 minutes. The VM5404HA / VM5808HA's default password is 1234.

3. To enable a lock screen, press **8** or **Next** to navigate to the next page, then press pushbutton **1**. The menu will then return to the home screen. When Lock Screen is enabled, pressing any pushbutton from the home screen will trigger the following message: *Please press "Menu" to start.*

4. Press **Menu** to return to the Menu page.Press **Cancel** to return to the previous level of menu.

Change Password

1. To change the password for accessing the unit, press pushbutton **2**.

```
1. Mode: None
2. Change Password
```

2. In the Old Password field, the cursor flashes at the first digit. Enter the old password (see *Enter Password*, page 10). If the old password is entered correctly, you can proceed to the next step.

```
Old Password: * * * *
Incorrect Password
```

Note: If you entered an incorrect password, an error message appears and the cursor goes back to the first digit (flashing). The Incorrect Password message clears as soon as a new digit is entered.

3. In the New Password field, the cursor flashes at the first digit. Enter the new password using the front panel number pushbuttons VM5808HA: (1111–8888) or VM5404HA: (1111–4444).

```
New Password: * * * *
```

4. Re-enter the new password in the following screen. The new password is applied by the VM5404HA / VM5808HA immediately.

```
Re-enter New Password: * * * *
```

If the password you entered does not match the one entered in the previous screen, an error message appears. Enter the new password correctly.

5. Press **Menu** to return to the Menu page.Press **Cancel** to return to the previous level of menu.

Save to a Profile

The switch allows users to store up to 8 (VM5404HA) or 16 (VM5808HA) (numbered P1–P16) different connection profiles that can be saved and recalled later.

The active Input-to-Output port connections on the LCD Main Screen is the configuration saved to a profile. When a user loads a profile, the change is immediate and the profile number is shown on the lower right corner of the LCD screen.

To save a profile once the desired port connections are set, do the following:

1. Press the **Menu** pushbutton to access the Menu page, then **8** or **Next** to navigate to the next pages. Press pushbutton **1** to open the select Save to a Profile page.

2. On the page that opens, you are asked to give the profile a number. Use the front panel number pushbuttons to select a profile number into which you want to save the configuration.

   VM5404HA: Options are P1–P8 (when saving a profile via the LCD), where:

   ◆ Input port pushbuttons **1–4** correspond to Profile **P1** to **P4**

   ◆ Output port pushbuttons **1–4** correspond to Profile **P5** to **P8**

   VM5808HA: Options are P1–P16 (when saving a profile via the LCD), where:

   ◆ Input port pushbuttons **1–8** correspond to Profile **P1** to **P8**

   ◆ Output port pushbuttons **1–8** correspond to Profile **P9** to **P16**

3. Press **Enter** to store the configuration – the LCD shows Profile Saved.

4. Press **Menu** to return to the Menu page, Press **Cancel** to return to the previous level of menu.

Note: Access the Save to a Profile page quickly by pressing the **Profile** pushbutton for longer than 3 seconds.

Play/Stop the Profile Schedule

Inputting port pushbutton **2** will Play or Stop the active Profile Schedule.

```
1: Save to a Profile          7: Back    ▲
2: Play/Stop the Profile Schedule
```

Turn Video Wall Off

If a video wall is currently playing, a submenu will appear.

```
1: Turn video wall off        7: Back    ▲
```

- ◆ Selecting **Turn video wall off** will return port assignments to their default (i.e. disassemble the video wall).

Profile Pushbutton

The **PROFILE** pushbutton lets users conveniently switch between connection profiles that have been saved or added to the Profile List (see *Profile List*, page 31).

When a Profile is in use, its profile number (P1–P16) is shown on the lower right corner of the LCD display.
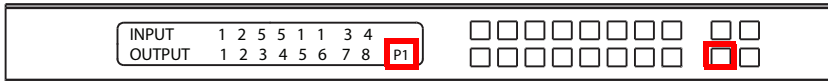
The Profile pushbutton functions as follows:

- After pressing the Profile pushbutton, available profile numbers will light up. The active profile number will flash. use the Input/Output pushbuttons to switch to a specific profile (P1 to P16) or (P1 to P8). Note that:

  - **Input** ports **1–8** or **1-4** correspond to Profile **P1** to **P8** or **P1** to **P4**

  - **Output** ports **1–8** or **1-4** correspond to Profile **P9** to **P16** or **P5** to **P8** (where Output Port 1=Profile 9, Output Port 2=Profile 10... Output Port 8=Profile 16)

  The selected pushbutton's light flashes, and the VM5404HA / VM5808HA immediately applies the port connections configured in the selected profile. If the light changes to a steady state, it means the profile is valid.

- After pressing the Profile pushbutton, pressing it again will change to next profile in Profile Scheduling (see page 37), not the profile list. This feature is only available while a schedule is playing.

- Press the **Cancel** pushbutton to exit

Note: If there are no profiles configured on the VM5404HA / VM5808HA device, an error message "*No Available Profile*" is displayed when the Profile pushbutton is pressed.

A Profile's port connections can be edited using the front panel pushbuttons (see *Port Switching*, page 11) or from the *Connections* page of the Browser GUI (see *Configuring Video Settings of a Profile*, page 39). Additionally, the Profile List can be configured via the Profile page of the Browser GUI (see *Profile List*, page 31).

Chapter 4
Browser Operation

Overview
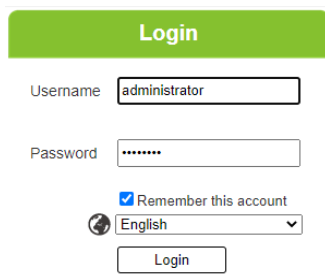
The VM5404HA / VM5808HA can be configured over a standard TCP/IP connection via its built-in Graphical User Interface (GUI). Because it can be accessed from anywhere over a network or the Internet, operators can easily log in via web browser. Security is ensured by password protection and user-configurable time-out. The matrix switch supports three levels of remote users with various privileges, and up to 16 users can log into the GUI at one time. For full details, see the sections that follow.

Logging In

To access the GUI, type the matrix switch's IP address into the address bar of any browser. If a Security Alert dialog box appears, accept the certificate – it can be trusted. The login screen appears:

- The default IP address is **http://192.168.0.60**
- The default Username and Password are: **administrator / password**
- Enter the username and password, then click **Login**.
- The same user can not be logged in simultaneously.
- Use the drop-down menu to select the GUI language
  - English, French, German, Italian, Japanese, Korean, Portuguese, Russian, Spanish, Simplified Chinese and Traditional Chinese

Note: The username supports lower case letters only.

Main Page

The Main Page opens to the **Profile List**. This is where you configure the input to output connections by creating profiles. The page is divided into three parts: the *Menu Bar*, *Profile List*, and *Profile Scheduling*.
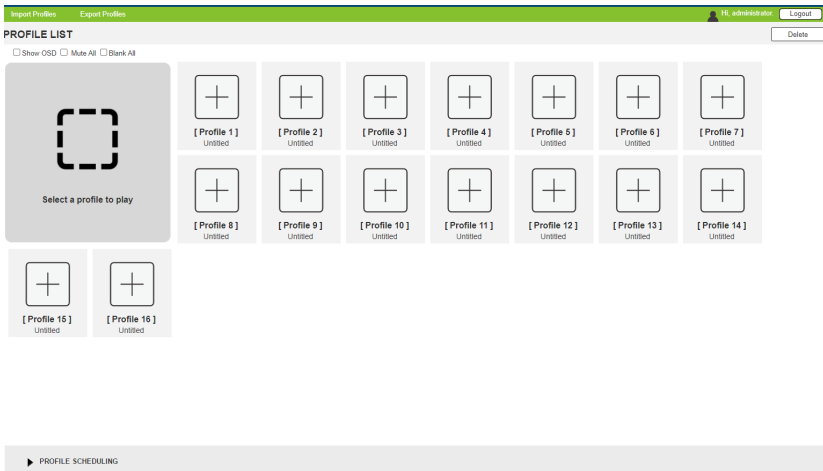
Menu Bar

The Menu Bar consists of the *Settings* icon and *Logout* button.
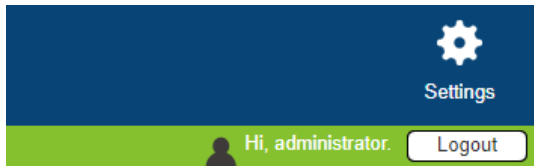
- Click **Settings** to enter the System Settings (see page 50).
- Click the **Logout** button to log out of the GUI.

Profile List

The *Profile List* lets you configure the input to output port connections by creating profiles to use. You can store up to 8 (VM5404HA) or 16 (VM5808HA) differently configured profiles that can be saved and played by two methods: locally via the unit's front panel pushbuttons and via the web GUI.
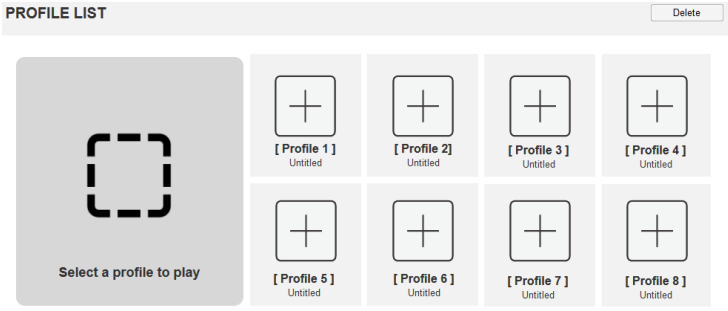
Adding/Playing a Profile

To configure a connection profile:

1. From the Profile List, click a **[Profile]**.

2. Select a template, configure the amount of your horizontal and vertical displays, and click **Apply**.
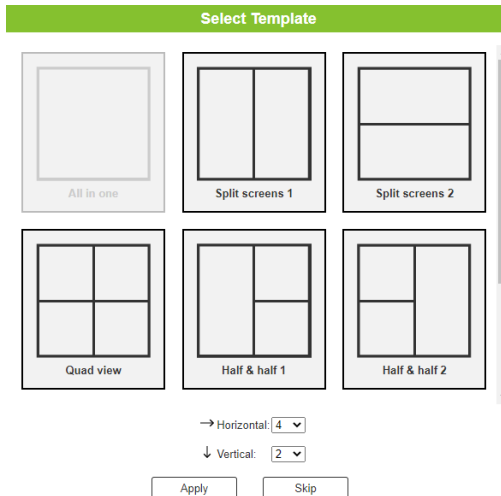
3. Configure the input to output connections for your profile, see *Configuring Video Settings of a Profile*, page 39.

4. New profiles appear in the *Profile List*, as shown here:
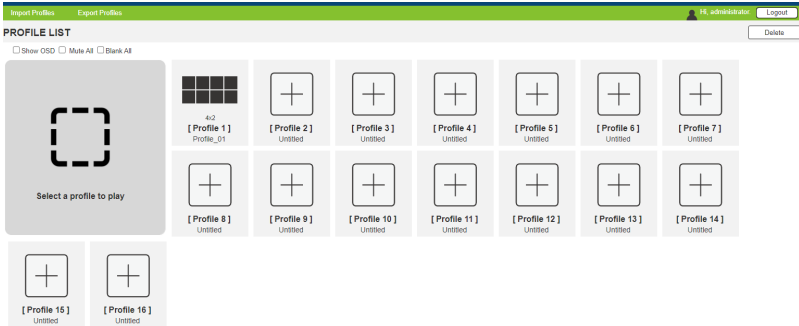
5. Select the profile and click **Apply.**
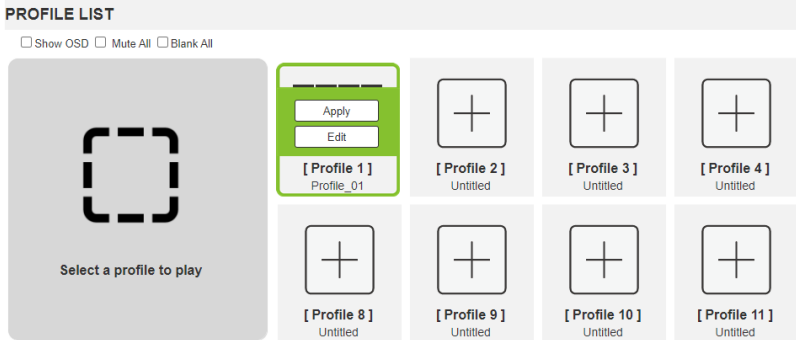
6. The profile appears in the large **Play** window and the connections start:
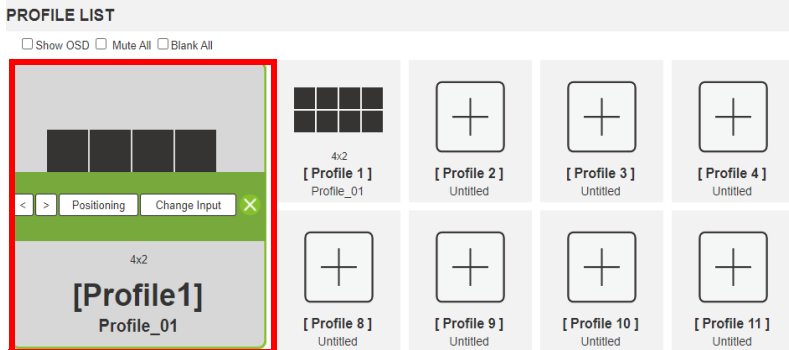
Note: More information about Profile List page options are provided on the next page.

Deleting a Profile

To delete a connection profile, do the following:

1. From the Profile List, click [Delete].

2. From the Profile List, click ⊗ on the top-right corner of the profile you want to remove.
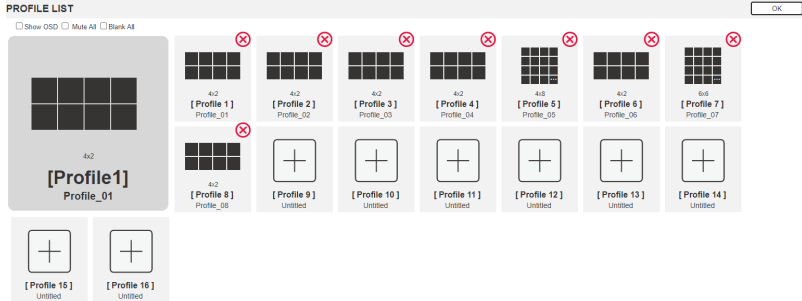
3. A warning message appears and click **OK**.
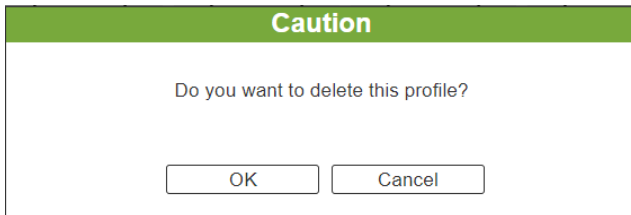
Exporting a Profile

To export the matrix switch's connection profiles, click **Export Profiles**. A configuration file will then begin downloading.

Importing a Profile

To import connection profiles to the matrix switch, do the following:

1. Click **Import Profiles**.

2. Browse to the configuration file, select it and click **Open**.

> **Note:** Importing a connection profile database will overwrite the current profiles.
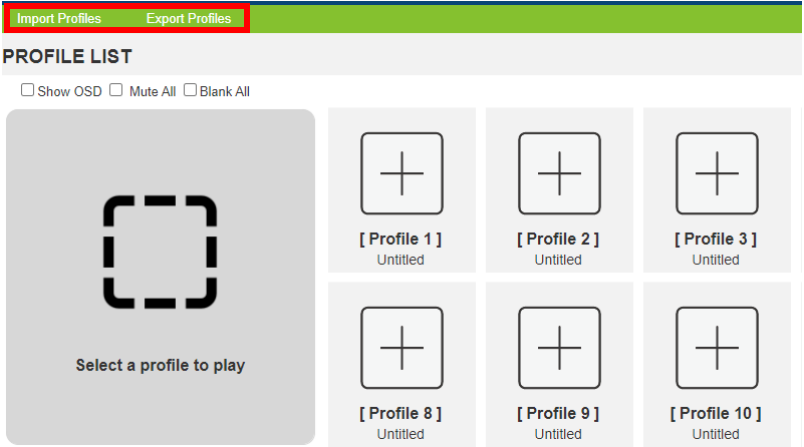
Profile List Options

Clicking a *Profile* or the *Play* window opens a pop-up menu with options.

Profile
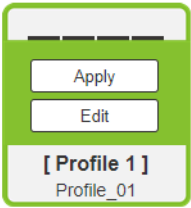
Option	Description
Apply	Click **Apply** to put the profile in the Play window. This allows you to start the profile connections.
Edit	Click **Edit** to configure the profile's input to output connections.

Play Window
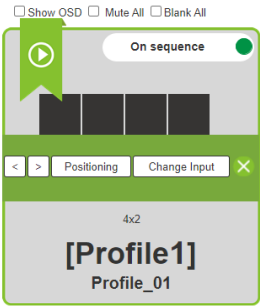
Option	Description
On Sequence	**On Sequence** will appear when a profile schedule is playing (see page 37).
<	Click < to go back to the previous profile in the sequence, when Profile Scheduling is in use. Only available with *On Sequence*.
>	Click > to advance to the next profile in the sequence, when Profile Scheduling is in use. Only available with *On Sequence*.
Positioning	Click **Positioning** to open a window that allows you to adjust the image position on each display. For Video Wall profiles, you can also set the Bezel Dimension, which is the frame thickness between each display.
	Click to remove the profile from the Play window.

Option	Description
Change Input	Click **Change Input** to configure the profile's input to output connections.

Other

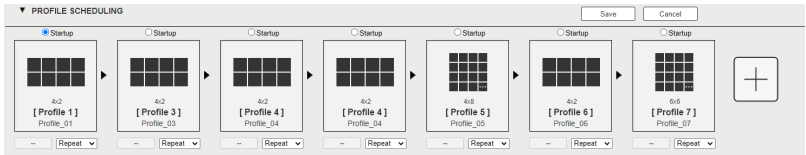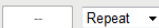| Option	Description
Show OSD	Check **Show OSD** to show text updates that appear on the display when configuration or port changes are made.
Mute All	Check **Mute All** to mute the audio for all ports.
Blank All	Check **Blank All** to turn off the video to all displays.

Profile Scheduling

Profile Scheduling is located below the Profile List. Scheduling allows you to queue and play connection profiles in sequence for a specific amount of time.

Option	Description
Edit	Click to edit profile schedule.
Play	Click to play profile schedule.
Stop	Click to stop profile schedule. This option will only be available after you click Play .
< >	Click to change to next or previous profile when a profile schedule is playing.

After selecting **Edit**, you will be presented with the following options.

| Option	Description
	Click to add profiles to the schedule in the order to be played, left to right, then set the amount of time each profile plays.
	Click a profile for a pop-up menu to appear: ◆ Select **Startup** to use the profile as the starting point for the schedule. ◆ Click **Replace** to replace the selected profile with another profile. ◆ Click **Remove** to delete the profile from the schedule. ◆ Use **< >** to change the profile's position in the schedule.
	Use the drop-down menu to select the duration (Hours, Minutes, or Seconds) and enter the amount of time for the profile to play. After the time expires, the schedule switches to the next profile. Use **Repeat** to stop switching between schedules and stay on the currently selected profile. If **Repeat** isn't used, the schedule will loop back to the first profile. If **Repeat** is used, a specific number of hours, minutes and seconds cannot be set and later profiles will not be played.
Save	Click **Save** to save the schedule as it appears. After saving, the Profile Scheduling window will close. When a Profile Schedule is playing the *On Sequence* box will appear in the Play window.
Cancel	Click **Cancel** to discard changes and return to the Profile Schedule page.

Configuring Video Settings of a Profile

To configure video settings of a profile, follow the steps below.

1. In the Profile List, locate the profile you wish to configure. Click the profile and then click **Edit**.
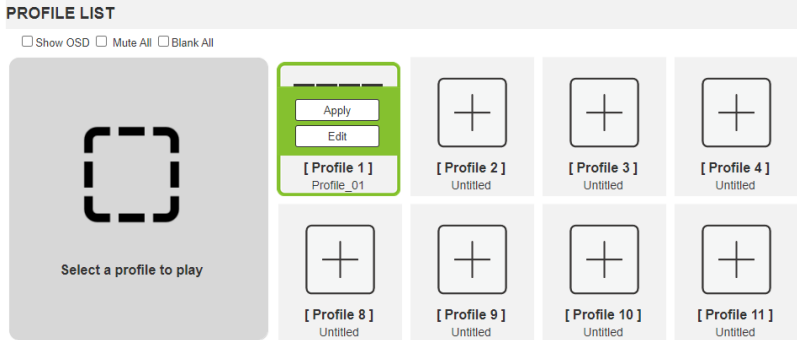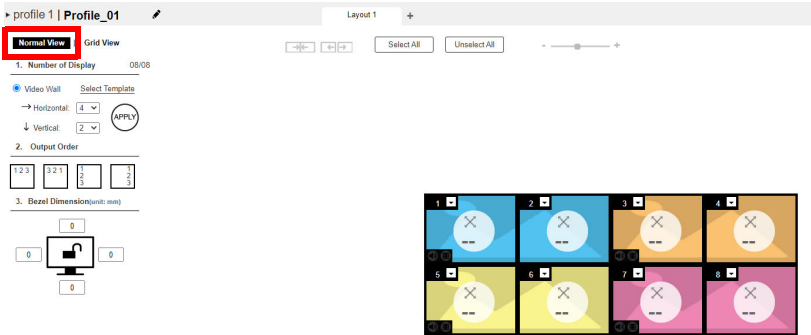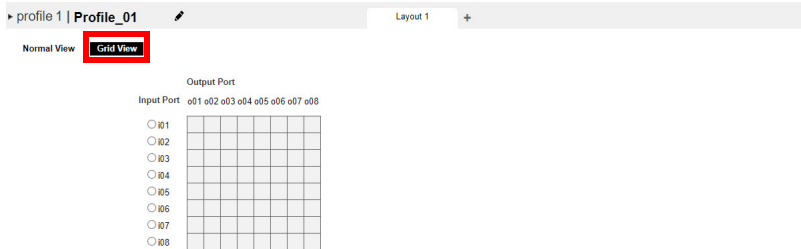

2. This screen appears.
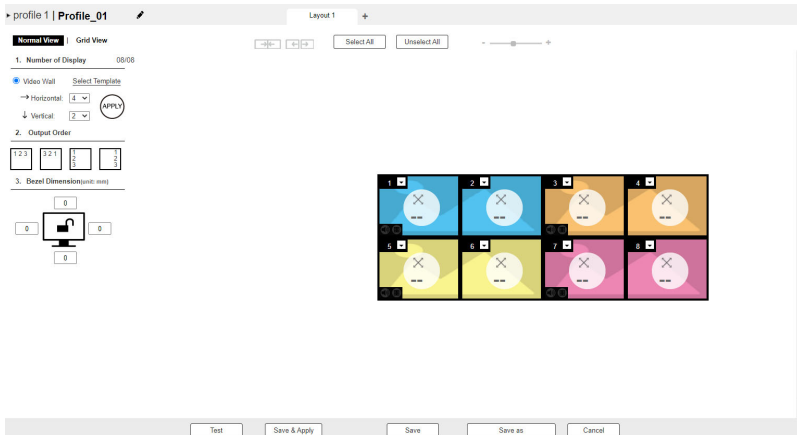
3. You can choose either the **Normal View** or the **Grid View** to edit the profile.

Normal View

- ◆ On top of video and audio assignments, the Normal View also allows you to configure the number of monitors and the bezel dimensions of the profile.
- ◆ For detailed information, see *Configuring Video Settings in Normal View*, page 42.

Grid View

- ◆ In Grid View, the audio and video outputs are assigned by mapping the audio / video input on the vertical axis to the audio / video output on a horizontal axis.

◆ For detailed information, see *System Settings*, page 50.

4. (Optional) Click **Test** to apply your configuration without saving it.

5. To save your configuration, **click Save & Apply**, **Save**, or **Save As**.

Configuring Video Settings in Normal View

Profile Layout Settings

| Option	Description
Number of Displays	Use the following controls to configure the layout type and the number of displays. ◆ **Video Wall:** Select this option for displays that are tiled together, where multiple monitors form one large screen – in various arrangements. **Note:** To ensure synchronized video outputs on your video wall, configure the Hold Time setting of the VM5404HA / VM5808HA if you are using any VE805R / VE816R with the VM8514. For detailed information, please visit ATEN's official website, go to Help Center (FAQ), and search for the information. ◆ **Select Template:** Click to open a window that allows you to select a predefined video wall layout. ◆ **Horizontal / Vertical:** Use these drop-down lists to select the number of displays that make up the video wall (a maximum of 64 are supported). Match this to the physical layout of the displays. **Note:** Click **Apply** to save the changes. A preview of the profile is shown on the right of the screen.
Output Order	Click any of the listed options to automatically assign output ports.
Bezel Dimension	Use the four boxes to increase / decrease the frame size for each active display.
Monitor Lock / Unlock	Click the monitor icon to **Lock** the (4) bezel settings, so that when one size is changed they all change. Click the monitor icon to **Unlock** the (4) bezel settings, so that each size can be set independently.

Display Preferences

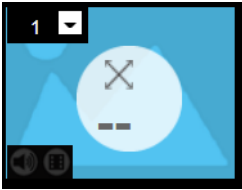| Option	Description
Output	This indicates the selected displays.
Video Input	Click to select a video source for the output(s). The chosen video source (port number) is indicated at the center of the output(s) in the preview.
Radio Button	◆ **Fit Width of Output(s):** fits the video to the width of the display. ◆ **Fit Height of Output(s):** fits the video to the height of the display. ◆ **Scale to Whole Output(s):** fits the video on the entire display.

Video Wall Settings

Each icon represents an output port and the connected display. Use the icons to create Independent and Grouped outputs. **Independent** outputs will display video on a single monitor. **Grouped** outputs will display video across multiple monitors as one large screen,
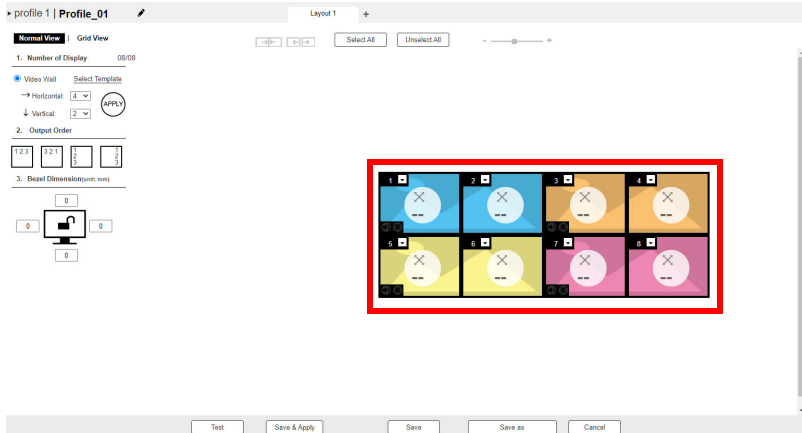
- ◆ Click an icon to choose its **Output** and **Video Input** from the *Display Preference* menu (see page 46).

- ◆ Click multiple icons to Group Outputs (see *Grouping*, page 47) and choose the **Video Input** from the *Display Preference* menu.

- ◆ Use **+** next to **Display Layout _1** to create additional layouts under the same profile.

- ◆ Click the PEN icon or name to edit the profile name.

- ◆ Click **Select All** to select all outputs.

- ◆ Click **Unselect All** to unselect all outputs.

- ◆ Click **Test** to play current profile without saving.

- ◆ Click **Save & Apply** to save the profile and put it in the Play window (see page 35).

- ◆ Click **Save** to save the profile.

- ◆ Click **Save as** to save the profile as a different profile number.

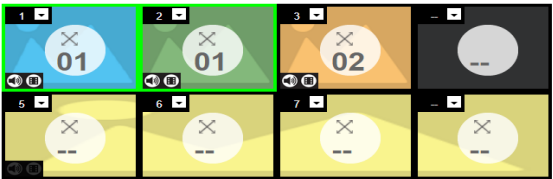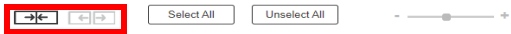- ◆ Click **Cancel** to discard changes and return to the Profile List.

Blank Output

Option	Description
Blank Icon	Click Blank Output icons to highlight icons in green and use the Display Preferences menu to set the video options (see , page 48).
	Select a **single** icon to set the **Output** and **Video Input** for an independent display (see *Independent Output*, page 46).
	Select **multiple** icons and set the **Video Input** to group displays as one screen (see *Grouping*, page 47). *You must first set the Output port for each icon*.
Drop-down Menu	Use the drop-down menu to select the Output port.

Independent Output

Option	Description
Independent Output	Independent Outputs are displays that have their own **Video Input** and **Output** selected. Independent Outputs:
	◆ Display their own video
	◆ Icons have their own color and Video Input
	Select an Independent Output and use the *Display Preferences* (page 48) menu select the **Video Input**.
Drop-down Menu	Use the drop-down menu to select the Output port.
Mute / Video	Click the **speaker** icon to mute the audio on/off.
	Click the **video** icon to turn the video off/on.

Grouping

| Option	Description
Grouping	Click multiple icons to Group Outputs (highlighted in green) and click →|← to group the displays into one screen*. Use the **Display Preferences** menu to select the **Video Input** for the group - each Output icon in the Group will appear with the same Video Input number and icon color (see *Group*, page 48). **Note:** Before grouping you must set the Output port for each icon.
Ungroup	Select a group and click ←|→ to ungroup the displays.

Group

Option	Description
Group	A **Group** (of Outputs) shares the same **Video Input** and displays the video together as one large screen. A Group of Outputs: ◆ Displays video across multiple monitors to form one screen ◆ Icons have the same color and Video Input number. ◆ Select a Group and use the *Display Preferences* menu to select the **Video Input**. ◆ To group outputs see *Grouping*, page 47.
Mute / Video 	Click the **speaker** icon to mute the audio on/off. Click the **video** icon to turn the video off/on.

Video Wall Example

The example below shows a video wall with 8 displays.
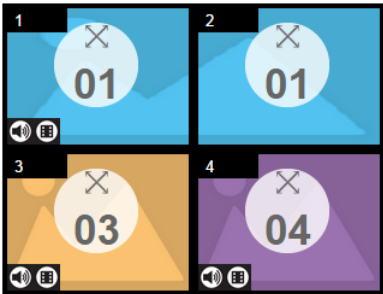
◆ Each Group and Independent Output has a unique color.

◆ This video wall has 1 **Group** and 2 **Independent** displays.

◆ The Group will show **Video Input 01** across both displays as one large screen.

◆ The Independent displays will show the video from their own **Video Input** – 03 and 04.

◆ Add Display Layouts to create separate video walls (see *Video Wall Settings*, page 45).

Configuring Video Settings in Grid View

In a grid view, the audio and video outputs are assigned by mapping the audio / video input on the vertical axis to the audio / video output on a horizontal axis.

- ◆ Select a box to coordinate *Input Ports* to *Output Ports*. By default, ports will be aligned so that *i01* will correspond to *o01*, etc.
- ◆ **Uncheck** a box to disable the video for that Output Port. The column will no longer contain a yellow box.
- ◆ **Check** an *Input Port* radio button to align all *Output Ports* to that *Input Port*.
- ◆ Click **Test** to play current profile without saving.
- ◆ Click **Save & Apply** to save a profile and begin playing it.
- ◆ Click **Save** to save the profile.
- ◆ Click **Save as** to save the profile as a different profile number.
- ◆ Click **Cancel** to undo all unsaved changes.

Output Options
For instructions on the *Output Options,* see *System Settings*, page 50.

System Settings

In the web console, click the **Settings** ⚙ icon from the Main page for the System Settings to open on the General page:

| General | Port Setting ▼ | Status ▼ | Maintenance ▼ |

General

Basic

| Device Name | | Language | English ▼ |

Fan status
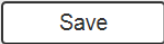
36 °C

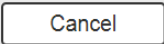Fan Speed Auto ▼

Serial Settings

Baud Rate 115200 ▼

Save   Cancel

The table below provides an overview of the available settings for each tab.

Tab	Supported Functions	Detailed Information
General	◆ Configure the device name. ◆ Select the interface language. ◆ Monitor the video matrix's fan temperature and configure the fan speed. ◆ Configure the baud rate for serial communications.	For more information, see *General*, page 52.

Tab	Supported Functions	Detailed Information
Port Settings	◆ Configure the OSD and CEC port settings. ◆ Configure the HDCP key for input and output ports. ◆ Configure the Seamless Switch™ settings. ◆ Name the input and output ports. ◆ Select EDID modes. ◆ Configure the local output settings.	For more information, see *Port Settings*, page 53.
Status	◆ View statuses of the input/output boards installed to the VM5404HA / VM5808HA and enable/disable FrameSync and Long Reach mode for the board. ◆ View system information such as network settings, firmware version, and the settings for audio/video assignment, volume, CEC, audio mode settings, and more.	For more information, see *YCBCR 4:2:0 Video Data Block*, page 70.
Maintenance	◆ Upgrade the firmware for the installed input and output boards ◆ Back up or restore the VM5404HA / VM5808HA's configuration ◆ Add, edit, or remove user accounts ◆ Configure the system network settings	See *Maintenance*, page 77.

Option	Description
Save	Click **Save** to apply the settings.
Cancel	Click **Cancel** to discard changes and reset settings.

General

The *General* page has three sections: Basic, Fan Status, and Serial Settings.

Basics

◆ **Device Name:** Type to name your VM5404HA / VM5808HA.

◆ **Language:** Click to select a language for the web interface.

Fan Status

◆ Fan Speed: Click to select a fan speed.

◆ Temperature and fan icons: Indicates the internal temperature and status of the cooling fans. The fan icons rotate to indicate they are working.

Note: If the fans have stopped working or are switched off, they will appear as follows. The fan module will then need to be replaced or reset.

Serial Setting

◆ **Baud rate**: Defines the baud rate for the serial port.

Port Settings

OSD/CEC

The OSD/CEC page lets users view and set OSD and CEC settings for all ports.

- ◆ **OSD**: Sets the default OSD option for the port. When OSD is on, real-time text updates appear on the display for 10 seconds when configuration and port changes are made to its output.
  - ◆ Use the drop-down menu to apply options to all ports, or ON/OFF button to enable/disable the OSD for each port.
- ◆ **CEC**: Consumer Electronics Control (CEC) allows interconnected HDMI devices to communicate and respond to one remote control.
  - ◆ Use the drop-down menu to apply options to all ports, or On/Off button to enable/disable CEC for a port.

HDCP

The *HDCP* page lets users view and set HDCP key settings between input and output ports for digital copy protection and to ensure seamless switching between different devices. This is an Administrator and Advanced User only function.

Input

Here users can select whether input port content is HDCP 1.4 or non-HDCP enabled, either individually or by applying one setting to all ports.

Connection

Here users can find a visual display of connection paths between inputs and outputs. When selecting an input, its path is displayed in green.

Output

Here users can define whether or not HDCP settings are fixed, either by individual port or by applying one setting to all ports. By prearranging and fixing keys, this setting ensures that the VM5404HA / VM5808HA feature is possible even when switching between HDCP and non-HDCP enabled devices.

HDCP Check

The HDCP Check button allows you to check the HDCP capability of the connected displays at one time. The analyses are indicated in the brackets after the Fix HDCP check box for each port.

Scaler

The Scaler page allow you to set Seamless Switch™ options which determine how a display performs when the input port is changed.

Note:

When VM5404HA / VM5808HA is enabled:

◆ The *Transition*, *Period* and *Scale Resolution* options can be enabled.

◆ Video outputs will not display 3D, Deep Color, or interlace (i.e., 1080i) resolutions correctly. To use these features, first disable Modular Matrix Switch.

◆ Videos may not display within range (fit on the screen), in which case, make sure to adjust the display settings on your device.

Enable Seamless Switch™ to remove the video distortion and delay seen when an input port is switched. Use the drop-down menu to apply options to all ports, or the On/Off button to enable/disable VM5404HA / VM5808HA per port. With Seamless Switch™ enabled, the following options are made available:

◆ **Transition**: Allows you to fade the video display when the Input port is changed. Use the period option to set the fade speed.

- ◆ Use the drop-down menu to apply options to all ports, or On/Off button to enable/disable Transition per port.

- ◆ **Period**: Sets the fade speed for the Transition option.

  - ◆ Use the drop-down menu to apply an option (*Slow*, *Normal*, or *Fast*) to all ports, or lower drop-down menus to apply options per port.

- ◆ **Scale Resolution**: Forces the port to scale the video displayed to the selected resolution.

  - ◆ Use the top drop-down menu to apply an option to all ports, or lower drop-down menus to apply options per port. Options are:

Port Name

The *Port Name* page lets you name the input and output ports for easy identification.

Port Name

Please enter characters without using "+/@=[];:',"<>?\()&

Input Port		Output Port	
1	Input_1	1	Output_1
2	Input_2	2	Output_2
3	Input_3	3	Output_3
4	Input_4	4	Output_4
5	Input_5	5	Output_5
6	Input_6	6	Output_6
7	Input_7	7	Output_7
8	Input_8	8	Output_8

Save   Cancel

- To name an Input/Output port, enter a descriptive name of up to 16 characters (including 0-9, a-z, A-Z, _, -) in the corresponding field.

-

- To change an Input/Output port's name, enter another value and click **Save.**

Note: The Input and Output port names can be the same.

EDID Settings

The EDID Setting page lets users view and select an EDID Mode so that the VM5404HA / VM5808HA can use the best resolution for its displays.

Note: The EDID Mode can also be selected via the Front Panel pushbuttons – see *Operation Mode*, page 18.

Extended Display Identification Data (EDID) is a data format that contains a display's basic information and is used to communicate with the video source/system.

EDID Mode

In the left panel of the page, users can select a pre-configured EDID Mode using the **EDID Mode** radio buttons.

Select the EDID Mode to use and click **Apply**. The VM5404HA / VM5808HA uses the settings configured for that EDID mode.

Options are:

- **ATEN Default**: All ports' EDID is the same as the hardware default EDID.

- **Port 1 Mode**: All ports' EDID is the same as Port1's EDID.

- **Remix**: All ports' EDID uses the best display resolution.

- **Customized**: See Customized Mode, see page 61.

EDID & CEA Description

The middle panel of the screen lets users view and configure the EDID or the CEA mode.

◆ From the middle column, click the option that you want to view and/or edit. There are two categories: **EDID** (Extended Display Identification Data) and **CEA** (Consumer Electronics Association).

◆ When you select the menu items on the middle column, the current settings for the selected EDID appear on the right column. Some of the screens are read-only.

◆ For more information, see *EDID Settings*, page 58.

Customized Mode

Use the **Customized** mode to automatically retrieve and save the EDID of a connected monitor/display device to an input source port.

- In the left panel, select **Customized** from the EDID Mode section and click **Apply**.

- **Port EDID Status**: Select the input source port to which you want to store the EDID configuration.

- **Retrieve EDID**: Click this button to retrieve the EDID of a selected port. Select a port using the pop-up screen.

- The right panel displays a summary of the acquired EDID settings that you can edit. Click **Save** and select the configuration for the **Current Port** or **All Ports** for the duration of the session.

Customized EDID Parameters

The EDID structure is comprised of 128 bytes in total – each heading shown in the left column corresponds to a specific number of bytes.

The pages for the pre-configured EDID Modes (Port 1, Default and Remix) cannot be edited. The pages for the Customized EDID, which can be edited, are discussed in the proceeding sections:

Established Timings

This page lists video resolutions/timings that display devices can support.

◆ Select the resolution(s) you want to use for the attached monitor/display device.

◆ Click **Clear All** to unselect all the items.

◆ Click **Select All** to check all the items.

◆ Click **Save** to apply the changes.

Standard Timings

This page shows eight resolutions/timings that display devices can support in addition to those listed in the Established Timings page.

- ◆ Select the *H Active Pixel* from the drop-down menu.
- ◆ Select the *Aspect Ratio* from the drop-down menu.
- ◆ Click **Save** to apply the changes.

Detail Timing / Display Description

This screen gives more video resolution options, and provides resolution/ timing details.

In the drop down menu, choose a resolution with values that fit the attached monitor/display device and click **Save**.

Monitor Description

This screen lets you specify the viewing specifications, namely horizontal and vertical scan ranges and pixel clock rate, of your monitor/display device.

Enter the values that correspond to your device and click **Save** to apply the changes.

CEA Settings

CEA is an extension data of the EDID structure, which further extends the standard definitions of EDID to support advanced features of monitors/display devices.

Display Support

This screen describes the display's basic digital components.

Select the YCbCr mode applicable to your display and click **Save**.

Video Data

This screen lists additional video resolution/timing displays that may be supported by other devices, other than PC monitors (for example, 1080i).

- ◆ Select the native resolution of the attached display device.
- ◆ Select the resolutions that work with the attached monitor/display device.
- ◆ Click **Clear All** to deselect all the items.
- ◆ Click **Save** to apply the changes.

Audio Data

This screen lets you select advanced audio configurations for your device.

Use the drop down menu to select the **Audio Format** (1~6) applicable to your audio output device, and click **Save** to apply the changes.

HDMI Forum Vendor Specific Block
This screen shows the display device's supported video parameters. Use the toggle button to enable or disable this function.

- ◆ **3D OSD Disparity:** Select this option to have Sink support receiving 3D OSD Disparity Indication in the HF-VSIF.

- ◆ **Dual View:** Select this option to have Sink support receiving 3D Dual View in the HF-VSIF.

- ◆ **Independent View:** Select this option to have Sink support receiving 3D Independent View in the HF-VSIF.

- ◆ **LTE 340Mcsc Scramble:** Select this option to have Sink support scrambling for TMDS Character Rates at or below 340 Mcsc.

- ◆ **RR Capable:** Select this option to have Sink initiate an SCDC Read Request.

- ◆ **SCDC Present:** Select this option to have Sink support SCDC functionality.

- ◆ **DC 30bit 420:** Select this option to have Sink support 10-bits/component Deep Color 4:2:0 Pixel Encoding.

- ◆ **DC 36bit 420:** Select this option to have Sink support 12-bits/component Deep Color 4:2:0 Pixel Encoding.

- ◆ **DC 48bit 420:** Select this option to have Sink support 16-bits/component Deep Color 4:2:0 Pixel Encoding.

YCBCR 4:2:0 Video Data Block

Use this page to configure a list of supported YCBCR 4:2:0 video resolutions and select one to be applied. Use the toggle button at the top-right to enable or disable this feature.

◆ To add a supported resolution, click an item in the Select column, and then click **Add**.

◆ Use the drop down menu **Native** to adjust the supported resolution of the display.

YCBCR 4:2:0 Compatibility Map Data Block

Use this page to configure a list of supported video resolutions for YCBCR 4:2:0 Compatibility Map Data Block and select one to be applied. Use the toggle button at the top-right to enable or disable this feature.

- To add a supported resolution, click an item in the Select column, and then click **Add**.
- Use the drop down menu **Native** to adjust the supported resolution of the display.

Detail Timing / Display Description

This screen gives more video resolution options, and provides resolution/ timing details (in addition to those specified in the EDID structure).

In the **Resolution** drop down menu, choose a resolution with values that fit the attached monitor/display device and click **Save**.

Configuring a Multiview

You can monitor multiple input sources in a multiview screen by installing an HDMI display to the local output port on the rear panel of the video matrix. To configure the display resolution, array mode, and fit mode, follow the steps below.

1. From the web console, go to **Settings** > **Port Setting** > **Local Output**. This screen appears.

2. Configure the following settings as needed.

   ◆ **Resolution**: Select a display resolution for the connected display.

   ◆ **Supported HDCP**: Click to check and show the HDCP capability of the connected display.

   ◆ **Array Mode**:

- ◆ Select an array (view) mode for the local display, such as single view, quad view, or manual (to specify the number of horizontal and vertical divisions, as illustrated in step 1).

- ◆ Use the drop-down menu in the preview to change the input source.

- ◆ **Fit Mode**

  - ◆ **Original Ratio:** displays each input in its original ratio
  - ◆ **Scale to Whole Output(s):** scale each input to fit the each division of the selected array mode.

Status

Connections

The connections tab provides a status summary of the input/output boards installed to the VM5404HA / VM5808HA and the devices that are connected to the ports on the input/output boards. If the connected devices support FrameSync, you can also enable/disable the function on this page.

Device List		Model Name	F/W Version	HDCP	FrameSync
Video Matrix		VM5808HA	V9.9.999		
Input Slot					
–	Port1:Input_1 (No Connection)				
–	Port2:Input_2 (No Connection)				
–	Port3:Input_3 (No Connection)				
–	Port4:Input_4 (No Connection)				
–	Port5:Input_5 (No Connection)				
–	Port6:Input_6 (No Connection)				
–	Port7:Input_7 (No Connection)				
–	Port8:Input_8 (No Connection)				
Output Slot					
–	Port1:Output_1 (No Connection)				ON
–	Port2:Output_2 (No Connection)				ON
–	Port3:Output_3 (No Connection)				ON
–	Port4:Output_4 (No Connection)				ON
–	Port5:Output_5 (No Connection)				ON
–	Port6:Output_6 (No Connection)				ON
–	Port7:Output_7 (No Connection)				ON
–	Port8:Output_8 (No Connection)				ON

Use the Connections page to:

◆ Find out about HDCP capability of the input/output boards

◆ Enable/disable FrameSync

System Information

Use this page to look up information and settings, such as system network settings, firmware version, video/audio input assignments, CED/OSD settings, and output resolutions.

Hint: Click ⌄ to view details and ↻ to refresh the system.

System Info

System Network ↻

IP Address	10.3.52.217
Sub Mask	255.255.254.0
Gateway	10.3.53.254
MAC Address	00:10:74:D5:01:22
IP Assign	DHCP

Device Info ↻

FW Version	V9.9.999 Aug 19 2022 11:44:38
FPGA SYS Version	V012
FPGA MTX Version	V014
FPGA RX Version	V060
FPGA TX Version	V060
Panel FW Version	V10R073

Video Connection ↻

Output	1	2	3	4	5	6	7	8
Input	-	-	-	-	-	-	-	-

Audio Connection ↻

Audio Input	-

CEC ↻

Output	1	2	3	4	5	6	7	8
Setting	X	X	X	X	X	X	X	X

OSD ↻

Output	1	2	3	4	5	6	7	8
Setting	O	O	O	O	O	O	O	O

Output Resolution ↻

Output	1	2	3	4
Reso	1280x720@60	1280x720@60	1920x1200@60	1920x1200@60
Output	5	6	7	8
Reso	1280x720@60	1920x1200@60	1920x1200@60	1920x1200@60

Maintenance

System Setup

You can use the System Setup page to do any of the following:

◆ Upgrade the firmware of the VM5404HA / VM5808HA.

◆ Back up and restore the VM5404HA / VM5808HA's system settings. Note that account settings cannot be backed up or restored.

Firmware upgrade

Mainboard I/O Board

Upgrade | Browse | Select a firmware file to begin

Backup / Restore

*User accounts cannot be backed up or restored.

Backup

Restore | Browse | Select a retore file to begin

reset to default

Firmware Upgrades

1. Download the firmware package from ATEN's official website.

2. In the VM5404HA / VM5808HA web interface, go to **Settings** > **Maintenance** > **System Setup** > **Firmware Upgrade** > **Mainboard I/O Board**, and click **Browse** to locate the firmware upgrade package.

3. Click **Upgrade** to begin the upgrade.

Note: After updating the firmware, it's recommended that you clear your web browser's cache and then reopen the web browser. This will ensure that the web console refreshes and functions properly.

Exporting System Settings

In the VM5404HA / VM5808HA's web console, go to **Settings** > **Maintenance** > **System Setup**, and then click **Backup**. A configuration file begins downloading.

Note: Account settings cannot be exported.

Importing System Settings

Make sure you have a previously saved backup file to execute the restore.

1. In the VM5404HA / VM5808HA's web console, go to **Settings** > **Maintenance** > **System Setup**.

2. Click **Browse** button to locate the configuration file. Make sure you have the correct file saved on your PC.

3. Click **Restore** to begin the restoration procedure.

Restoring Factory Defaults

To reset the VM5404HA / VM5808HA to its default settings, do the following.

1. In the VM5404HA / VM5808HA's web console, go to **Settings** > **Maintenance** > **System Setup**.

2. Click the **reset to default** button on the far right and follow the on-screen instructions to complete the procedure.

User Account

The *User Account* page lets you add, edit, or delete users and change the password for accessing the VM5404HA / VM5808HA's GUI.

Note: This is an Administrator-only function.

- ◆ **Add account** – Click the *Add account* button to add another user to the list. The VM5404HA / VM5808HA supports up to 32 users and allows up to 16 concurrent logins (see page 80 for more details).

- ◆ **Edit** – Click the *Edit* button to change user information. This option allows

an Administrator to edit individual accounts.

- ◆ Edit – Rename the user account, set the password, add a description, and set the user's permission level.

- ◆ 🗑 Delete – Removes the user account.

- ◆ The default username and password are: administrator/password.

Adding an Account

1. In the VM5404HA / VM5808HA web interface, go to **Settings** > **Maintenance** > **User Account**.

2. Click **+Add Account**. This dialog box appears.

3. Configure the account settings.

   ◆ Enter a user name and password

   Note:

   ◆ The username / password should be 5–16 characters in length, and may contain multi-lingual characters (excluding :;=[]+=/?\|).

   ◆ Passwords are case sensitive.

   ◆ Usernames only support lower case letters.

   ◆ Add a description for the user.
   ◆ Select a permission level for the account:
      ◆ **Administrator** – this level provides full access and control of the VM5404HA / VM5808HA, in addition to full account management privileges.
      ◆ **Advanced User** – this level provides full access and control with no privileges for account management, firmware upgrades, or file importing/exporting system settings.
      ◆ **Basic User** – this level only provides basic functions (connections and open profiles).

Editing a User Account

1. Log in the VM5404HA / VM5808HA web interface using an administrator account.

2. Go to **Settings** > **Maintenance** > **User Account**. A list of created accounts appears.

3. Click **Edit** to edit account settings as needed.

Network Settings

You can configure the VM5404HA / VM5808HA's network settings, such as connection mode (DHCP or fixed IP address), IP address for the web console, and Telnet connection.

To configure the system network settings, do the following:

1. In the VM5404HA / VM5808HA web interface, go to **Settings** > **Maintenance** > **Network**. This page appears.

Network

DHCP	⦿ Enable ◯ Disable
IP Address	10.3.166.162
Subnet Mask	255.255.254.0
Default Gateway	10.3.167.254
Website Timeout	N/A ⌄
MAC Address	00:10:74:D5:00:03
Telnet	⦿ Enable ◯ Disable
IP Installer	⦿ Enable ◯ Disable ◯ View Only

2. Configure the settings as needed.

   ◆ **DHCP**

      ◆ **Enable** – Select this option to allow the DHCP server to automatically assign an IP address to the VM5404HA / VM5808HA.

      ◆ **Disable** – Select this option to assign a static IP address for the device.

Configure other IP settings as needed. Default settings are indicated in bold.

◆ IP Address – **192.168.0.60**
◆ Subnet Mask – **255.255.255.0**
◆ Default Gateway – **192.168.0.1**
◆ Website Timeout* – N/A, **5**, 10, 30, 60 minutes
◆ Telnet Configuration – **enabled**

Note:

◆ The Website Timeout setting controls how long an inactive web connection stays logged into the VM5404HA / VM5808HA. Any changes will take effect immediately. The default setting is 5 minutes.

◆ To reset the system network settings, go to **Settings** > **Maintenance** > **System Setup**, and then click the **reset to default** button.

3. Enter the values, then click Save. Changes may take a few seconds and after refreshing the page automatically redirects you to the IP address specified.

Chapter 5
CLI Commands

Overview

The VM5404HA / VM5808HA can be configured and controlled via RS-232 or Telnet commands when connected to a host computer or other device, such as a control system. This chapter provides information on how to connect to the VM5404HA / VM5808HA via RS-232/Telnet and command syntax.

Connecting to the Matrix Switch via Telnet

To establish a Telnet session with the VM5404HA / VM5808HA, do the following:

1. Connect a host computer or control system to a shared network with the VM5404HA / VM5808HA.

2. Open a command-line interpreter program from your computer.

3. In the command-line interpreter, type the VM5404HA / VM5808HA's IP address in the following way:

   `telnet [IP address]:23`

4. Press **Enter**. The login screen appears.

5. At the login prompt, type the login username and password for the VM5404HA / VM5808HA.

6. When a session is established with the VM5404HA / VM5808HA, you can control and configure the VM5404HA / VM5808HA via RS-232 commands. For more information on commands, see *Commands*, page 85

Note: If a user logs in using a username that is already in session, the newest login takes effect and the previous session will be replaced.

Connecting to the Matrix Switch via RS-232

You can control and operate the VM5404HA / VM5808HA using a high-end controller or PC. To connect to the VM5404HA / VM5808HA via RS-232, do the following:

1. Connect the RS-232 serial port on the VM5404HA / VM5808HA to the RS-232 serial port on your computer using a 9-wire straight cable, with only pin 2 to pin 2, pin 3 to pin 3, and pin 5 to pin 5 connected.
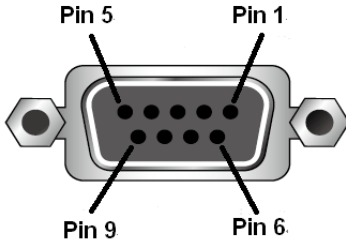
Pin	Description
1	Not connected
2	RXD
3	TXD
4	Not connected
5	GND
6	Not connected
7	Not connected
8	Not connected
9	Not connected

	Signal	Main Cable	Pin	Signal	
	TxD		2	TxD	
	RxD		3	RxD	
Tx Rx GND	GND		5	GND	RS-232 DB9, Female
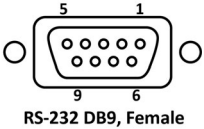
2. The controller's serial port should be configured as follows:

RS-232 Protocol	
Baud Rate	19200
Data Bits	8
Parity	None
Stop Bits	1
Flow Control	None

When a session is established with the VM5404HA / VM5808HA, you can control and configure the VM5404HA / VM5808HA via RS-232 commands. For more information on commands, see *Commands*, page 85.

Command Verification

After entering a command, a verification message appears at the end of the command line as follows:

- **Command OK** - indicates that the command is correct and successfully performed by the switch
- **Command incorrect** - indicates that the command has the wrong format and/or values.

Commands

After connecting to the VM5404HA / VM5808HA via Telnet or RS-232, you can operate the system using the following commands.

Switch Port Command

The Switch Port command allows you to switch ports on the VM5404HA / VM5808HA.

The formula for the Switch command is as follows:

```
Command + Input + Number + Output + Number + Control +
[Enter]
```

1. For example, to switch input port 02 to output port 05, type:

   ```
   sw i02 o05 [Enter]
   ```

2. To switch output port 04 to the next port, type:

   ```
   sw o04 + [Enter]
   ```

3. To turn off video output on port 03, type:

   ```
   sw o03 off [Enter]
   ```

4. To switch audio from input port 06 to stereo audio output, type:

   ```
   sw i06 console audio [Enter]
   ```

The following tables show the possible values for the **Switch Port** command:

Command	Description
sw	Switch command

Input Command	Description
i	Input command

Port number	Description
xx	01-08 port

Output Command	Description
o	Output command

Port number	Description
yy	01-08 port
*	All output ports

Group	Description
normal	default HDMI audio outputs
console audio	Switch the audio to the stereo audio output

Control	Description
on	Turn on the display
off	Turn off the display
+	Next Port
–	Previous Port

Note: 1. By default, input port 01 is tied to output port 01; input port 02 is tied to output port 02; and so on until port 08 (i.e., o01 i01, o02 i02).

2. Each command string can be separated with a space.

3. The **Port Number** can be skipped, and the default value will be used.

4. The **Group** can be skipped, and the default value (normal; HDMI audio output) will be used.

The following table lists the available Switch Port commands:

Command	Input Command	Input Port	Output Command	Output Port	Control	Enter	Description
sw	i	xx	o	yy *		[Enter]	Switch Input Port xx to Output Port yy (xx:01–08; yy:01–08, *)
sw			o	yy *	on off	[Enter]	Turn on Output Port yy Turn off Output Port yy (yy:01–08, *)

Command	Input Command	Input Port	Output Command	Output Port	Control	Enter	Description
sw			o	yy *	+ –	[Enter]	Switch Output port yy to next Output port. Switch Output port yy to previous Output port. (yy:01–08, *)

EDID Mode Command

Extended Display Identification Data (EDID) is a data that contains a display's basic information and is used to communicate with the video source.

The formula for the EDID command is as follows:

```
Command + Control + [Enter]
```

1. For example, to use the Port1 EDID mode, type:

```
edid port1 [enter]
```

The following tables show the possible values for the **EDID** command:

Command	Description
edid	EDID Mode command

Control	Description
port1	Implement the EDID of the connected display to Port 1, and pass it to the video source.
remix	Implement the EDID of each connected display according to its connection when the VM5404HA / VM5808HA is first powered on, or immediately after selecting the Remix option.
default	Implements ATEN's default EDID. (default)
custom	Implements the customized mode as set in the EDID system settings. (See *Customized EDID Parameters*, page 62)

Note: Each command string can be separated with a space.

The following table lists the available EDID commands:

Command	Control	Enter	Description
edid	port1	[Enter]	The EDID from Port 1 is passed to the video source.
edid	remix	[Enter]	The VM5404HA / VM5808HA implements the EDID of each connected display according to its connection when the VM5404HA / VM5808HA is first powered on, or immediately after selecting the Remix option.
edid	default	[Enter]	ATEN's default EDID is passed to the video source.
edit	custom	[Enter]	Implements the customized mode.

Mute Command

Mute allows you to enable or disable an output port(s) audio.

The formula for the Mute command is as follows:

```
Command + Output + Number + Control + [Enter]
```

1. For example, to mute the audio coming from output port 1, type:

```
mute o01 on [enter]
```

The following tables show the possible values for the **Mute** command:

Command	Description
mute	Mute command

Output Command	Description
o	Output command

Port number	Description
yy	01-08 port (default is 01)
*	All output ports

Group	Description
normal	Mute the default HDMI audio outputs.
console	Mute the stereo audio output

Control	Description
on	Mute on; audio from HDMI output port is disabled
off	Mute off; audio output enabled (default)

Note: 1. Each command string can be separated with a space.

2. Skip the output port command to mute or enable the audio of all output ports.

3. The **Group** can be skipped, and the default value (normal; HDMI audio output) will be used.

The following table lists the available Mute commands:

Command	Output Command	Output Port	Control	Enter	Description
mute	o	yy *	on	[Enter]	Audio on for output port yy (yy:01–08, *)
mute	o	yy *	off	[Enter]	Audio off for output port yy (default) (yy:01–08, *)

CEC Command

Consumer Electronics Control (CEC) allows interconnected HDMI devices to communicate and respond to the same remote control.

The formula for the CEC command is as follows:

```
Command + Output + Number + Control + [Enter]
```

1. For example, to enable the CEC function on output port 1, type:
```
cec o01 on [enter]
```

The following tables show the possible values for the **CEC** command:

Command	Description
cec	CEC command

Output Command	Description
o	Output command

Port number	Description
yy	01–08 port (default is 01)
*	All output ports

Control	Description
off	Disable CEC (default)
on	Enable CEC

Note: Each command string can be separated with a space.

The following table lists the available CEC commands:

Command	Output Port	Control	Enter	Description
cec	yy *	off	[Enter]	CEC off for output port yy (default) (yy:01–08, *)
cec	yy *	on	[Enter]	CEC on for output port yy (yy:01–08, *)

Scaling Command

The Scaling command allows you to set a resolution for scaling the display connected to an output port.

The formula for the Scaling command is as follows:

```
Command + Output + Number 1 + Horizontal Resolution +
Number 2 + Vertical Resolution + Number 3 + Frequency +
Number 4 + Control + [Enter]
```

1. For example, to turn scaling off for output port 02, type:

```
scaling o02 off [Enter]
```

2. To set the scaling for output port 04 to 1920x1080@60Hz, type:

```
scaling o04 1080p [Enter]
```

3. To set the scaling for all output ports to the connected display's native resolution, type:

```
scaling o* native [Enter]
```

The following tables show the possible values for the **Scaling** command:

Command	Description
scaling	Scaling command

Output	Description
o	Output command

Port Number	Description
yy	01–08 port
*	All output ports

Horizontal Resolution	Description
hor	Horizontal resolution command for scaling

Resolution Number	Description
hhhh	Horizontal resolution

Vertical Resolution	Description
ver	Vertical resolution command for scaling

Resolution Number	Description
vvvv	Vertical resolution

Frequency	Description
freq	Frequency command for scaling

Frequency Number	Description
fff	Frequency resolution

Control	Description
off	Turn off the scaling function (by pass mode)
native	Map display's native resolution for scaling (default)

Note: 1. Each command string can be separated with a space.

2. The **Port Number** command string can be skipped, and the default value will be used.

The following table lists the available Scaling commands:

Command	Output	Port Number	Horizontal Resolution	Number	Vertical Resolution	Number	Frequency	Number	Control	Enter	Description
scaling	o	yy *							off	[Enter]	Turn off scaling for port yy (by pass mode) yy: 01 ~ 08 or *
scaling	o	yy *							native	[Enter]	Enable display's native resolution for scaling on output port yy (default) yy: 01 ~ 08 or *
scaling	o	yy *	hor	1920	ver	1080	freq	60		[Enter]	Scale output port yy to 1920x1080@60 Hz yy: 01 ~ 08 or *
scaling	o	yy *	hor	1280	ver	720	freq	60		[Enter]	Scale output port yy to 1280x720@60 Hz yy: 01 ~ 08 or *
scaling	o	yy *	hor	1920	ver	1200	freq	60		[Enter]	Scale output port yy to 1920x1200@60 Hz yy: 01 ~ 08 or *

Command	Output	Port Number	Horizontal Resolution	Number	Vertical Resolution	Number	Frequency	Number	Control	Enter	Description
scaling	o	yy *	hor	1600	ver	1200	freq	60		[Enter]	Scale output port yy to 1600x1200@60 Hz yy: 01 ~ 08 or *
scaling	o	yy *	hor	1400	ver	1050	freq	60		[Enter]	Scale output port yy to1400x1050@60Hz yy: 01 ~ 08 or *
scaling	o	yy *	hor	1280	ver	1024	freq	60		[Enter]	Scale output port yy to 1280x1024@60 Hz yy: 01 ~ 08 or *
scaling	o	yy *	hor	1024	ver	768	freq	60		[Enter]	Scale output port yy to 1024x768@60 Hz yy: 01 ~ 08 or *
scaling	o	yy *	hor	1280	ver	800	freq	60		[Enter]	Scale output port yy to 1280x800@60 Hz yy: 01 ~ 08 or *
scaling	o	yy *	hor	720	ver	576	freq	50		[Enter]	Scale output port yy to 720x576@50Hz yy: 01 ~ 08 or *
scaling	o	yy *	hor	1600	ver	900	freq	60		[Enter]	Scale output port yy to 1600x900@60 Hz yy: 01 ~ 08 or *

Fan Speed Command

The Fan Speed command allows you to set the internal fan speed that cools the VM5404HA/VM5808HA.

To set the fan speed, use the following command:

```
Command + Control + [Enter]
```

1. For example, to set the fan to low speed, type:

```
fan low [Enter]
```

The following tables show the possible values for the **Fan Speed** command:

Command	Description
fan	Fan Speed Command

Control	Description
low	Set internal fan to low speed (default)
mid	Set internal fan to normal speed
high	Set internal fan to high speed

Note: Each command string can be separated with a space.

The following table lists the available Fan Speed commands:

Command	Control	Enter	Description
fan	low	[Enter]	Sets fan speed to low
fan	mid	[Enter]	Sets fan speed to normal
fan	high	[Enter]	Sets fan speed to high

Echo Command

The Echo function updates the RS-232 controller when operations are made via the front panel pushbuttons, web browser, or telnet. The changes echo back to the RS-232 controller to keep the settings in sync with the device.

The formula for the Echo command is as follows:

Command + Control + [Enter]

1. For example, to enable the echo feature, type:

echo on [Enter]

The following tables show the possible values for the **Echo** command:

Command	Description
echo	Echo command

Control	Description
on	Turns Echo function on
off	Turns Echo function off (default)

Note: Each command string can be separated with a space.

The following table lists the available Echo commands:

Command	Control	Enter	Description
echo	on	[Enter]	Turn on Echo function
echo	off	[Enter]	Turn off Echo function

Black Screen Command

The Black Screen command turns a display screen black when no source signal is detected. This prevents the display from showing the default blue or other color used when no source signal is detected.

The formula for the Black Screen command is as follows:

```
Command + Control + [Enter]
```

1. For example, to enable the Black Screen function, type:

```
blackscreen on [Enter]
```

The following tables show the possible values for the **Black Screen** command:

Command	Description
blackscreen	Black Screen command

Control	Description
on	Turns Black Screen function on (default)
off	Turns Black Screen function off

Note: Each command string can be separated with a space.

The following table lists the available Black Screen commands:

Command	Control	Enter	Description
blackscreen	on	[Enter]	Turn on Black Screen function
blackscreen	off	[Enter]	Turn off Black Screen function

Read Command

The Read command allows you to view the current configuration, firmware and other information about the device.

The formula for the Read command is as follows:

```
Command + [Enter]
```

1. To view information about the device, type:

```
read [Enter]
```

The following table shows the possible values for the **Read** command:

Command	Description
read	Read command

Note: Each command string can be separated with a space.

The following table lists the available Read commands:

Command	Enter	Description
read	[Enter]	View information about the device

Reset Command

The Reset command allows you to reset the VM5404HA / VM5808HA to the default factory settings.

The formula for the Reset command is as follows:

```
Command + [Enter]
```

The following tables show the possible values for the **Reset** command:

Command	Description
reset	Reset command

Note: Each command string can be separated with a space.

The following table lists the available Reset commands:

Command	Enter	Description
reset	[Enter]	Resets the device settings

Baud Rate Command

The Baud Rate command allows you to set the RS-232 data rate for the VM5404HA / VM5808HA to use. Options are 9600, 19200 (default) 38400 and 115200.

The formula for the Baud Rate command is as follows:

```
Command + Control + [Enter]
```

1. For example, to set 38400 as the baud rate, type:

```
baud 38400 [Enter]
```

The following tables show the possible values for the **Baud Rate** command:

Command	Description
baud	Sets the RS-232 baud rate

Control	Description
9600	Use 9600 baud rate
19200	Use 19200 baud rate (default)
38400	Use 38400 baud rate
115200	Use 115200 baud rate

Note: Each command string can be separated with a space.

The following table lists the available Baud Rate commands:

Command	Control	Enter	Description
baud	9600 / 19200 / 38400 / 115200	[Enter]	Sets the RS-232 baud rate

Save/Load Profile Command

The Save/Load Profile command allows you to save and load connection profiles. Saving profiles will save the connections currently in use.

The formula for the Save/Load Profile command is as follows:

```
Command + Profile + Number + Control + [Enter]
```

1. For example, to save the current connection configuration to profile 02, type:

```
profile f 02 save [Enter]
```

The following tables show the possible values for the **Save/Load Profile** commands:

Command	Description
profile	Save / Load profile

Profile	Description
f	Profile command

Profile Number	Description
yy	VM5404HA: 01-08 (default is 01)
	VM5808HA: 01-16 (default is 01)

Control	Description
save	Save the connection configuration
load	Load a saved profile

Note: Each command string can be separated with a space.

The following table lists the available Save/Load Profile commands:

Command	Profile	Profile Number	Control	Enter	Description
profile	f	yy *	save	[Enter]	Save the connections as profile yy. VM5404HA: (yy:01~08, *)
					VM5808HA: (yy:01~16, *)
profile	f	yy *	load	[Enter]	Load profile yy. VM5404HA: (yy:01~08, *)
					VM5808HA: (yy:01~16, *)

OSD Command

To enable or disable the On-Screen Display (OSD) for displays, use the following command:

```
Command + Output + Number + Control + [Enter]
```

1. For example, to enable the OSD for output 07, type:

```
osd o07 on [Enter]
```

2. For example, to disable the OSD for all outputs, type:

```
osd o* off [Enter]
```

The following tables show the possible values for the **OSD** command:

Command	Description
osd	OSD command

Output	Description
o	Output port command

Number	Description
yy	Output port 01–16 port (default is 01)
*	All output ports

Control	Description
on	Enable OSD function
off	Disable OSD function (default)

Note: Each command string can be separated with a space.

The following table lists the available OSD commands:

Command	Output Command	Output Port	Control	Enter	Description
osd	o	yy *	on	[Enter]	OSD on for output yy yy:01–16, *
osd	o	yy *	off	[Enter]	OSD off for output yy (default) yy:01–16, *

Local Output OSD Command

To turn on or off the local OSD, use the following command:

```
Command + Parameter + Control + [Enter]
```

1. For example, to turn on the local OSD, type:

```
osd olocal on [Enter]
```

2. For example, to turn off the local OSD, type:

```
osd olocal off [Enter]
```

The following tables show the possible values for the **Local Output OSD** command:

Command	Description
osd	OSD command

Parameter	Description
olocal	Local output port command

Control	Description
on	Turn on the local output port OSD
off	Turn off the local output port OSD

Note: Each command string can be separated with a space.

The following table lists the available OSD commands:

Command	Parameter	Control	Enter	Description
osd	olocal	on	[Enter]	Turn on the local output OSD.
osd	olocal	off	[Enter]	Turn off the local output OSD.

Array Command

To set up an viewing mode (1 × 1, 1 × 2, 2 × 2, or 4 × 1 VM5404HA only; 8 × 1 VM5808HA only) for the local display, use the following command:

```
Command + Vertical + Number + Horizontal + Number +
Input + Sequence + [Enter]
```

1. For example, to set up the viewing mode to a 2 × 2 array with video inputs from Input Port 7, 8, 2, and 3 sequentially, type:

```
array ver 2 hor 2 i7,8,2,3 [Enter]
```

2. For example, to set up a single view with video from Input Port 8, type:

```
array ver 1 hor 1 i8 [Enter]
```

3. For example, to set up the viewing mode to a 8 × 1 array with all 8 video inputs, type:

```
array ver 8 hor 1 [Enter]
```

The following tables show the possible values for the Array command:

Command	Description
array	array viewing mode command

Vertical	Description
ver	vertical command

Vertical Number	Description
m	numbers of vertical inputs 1, 2, 4, or 8

Horizontal	Description
hor	horizontal command

Horizontal Number	Description
n	numbers of horizontal inputs 1, 2, 4, or 8

Input	Description
i	input command

Input Sequence	Description
yy	sequence of input ports to show VM5404HA 01–04 port and VM5808HA 01–08 port.

Note: 1. Each command string should be separated with a space.

2. The viewing array supports modes of 1x1 (single), 1 × 2 (side by side), 2 × 2 (quad mode), or 4 × 1 (VM5404HA only) and 8 × 1 (VM5808HA only) (show all) only.

3. Use commas to separate the Input Ports when setting the Input Sequence. The Input Sequence can be omitted in the 4 × 1 and 8 × 1 mode, which all 4 and 8 Input Ports will show on the local screen.

The following table lists the available Array commands:

Command	Vertical Command	Vertical Number	Horizontal Command	Horizontal Number	Input	Input Sequence	Enter	Description
array	ver	m	hor	n	i	yy	[Enter]	Show an m × n array on the local display with sequence yy yy: VM5404HA 01–04; VM5808HA 01–08
array	ver	m	hor	n			[Enter]	Show all Input sources in a 4 × 1 or 8 × 1 array mode m:4 or 8; n:1

Alert Command

To trigger a warning when issues arise for a specific input port, use the following command:

```
Command + Input + Number + Control + [Enter]
```

1. For example, to enable the basic Alert function for input port 1, type:

```
alert i01 m1 [enter]
```

The following tables show the possible values for the **Alert** command:

Command	Description
alert	Alert command

Input	Description
i	Input command

Port number	Description
yy	01–08 port

Control	Description
off	Disable Alert (default)
m1	Show basic Alert (flashing border)
m2	Show detailed Alert (flashing border and port information)

Note: Each command string can be separated with a space.

The following table lists the available Alert commands:

Command	Input Command	Input Port	Control	Enter	Description
alert	i	yy	off	[Enter]	Alert off for input port yy (yy:01–08)
alert	i	yy	m1	[Enter]	Basic Alert on for input port yy (yy:01–08)
alert	i	yy	m2	[Enter]	Detailed Alert on for input port yy (yy:01–08)

This Page Intentionally Left Blank

Appendix

Safety Instructions

General

- Read all of these instructions. Save them for future reference.
- Follow all warnings and instructions marked on the device.
- This product is for indoor use only.
- Do not place the device on any unstable surface (cart, stand, table, etc.). If the device falls, serious damage will result.
- Do not use the device near water.
- Do not place the device near, or over, radiators or heat registers.
- The device cabinet is provided with slots and openings to allow for adequate ventilation. To ensure reliable operation, and to protect against overheating, these openings must never be blocked or covered.
- The device should never be placed on a soft surface (bed, sofa, rug, etc.) as this will block its ventilation openings. Likewise, the device should not be placed in a built in enclosure unless adequate ventilation has been provided.
- Never spill liquid of any kind on the device.
- Unplug the device from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.
- The device should be operated from the type of power source indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.
- The device is designed for IT power distribution systems with 230V phase-to-phase voltage.
- To prevent damage to your installation it is important that all devices are properly grounded.
- The device is equipped with a 3-wire grounding type plug. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not attempt to defeat the purpose of the grounding-type plug. Always follow your local/national wiring codes.
- Do not allow anything to rest on the power cord or cables. Route the power cord and cables so that they cannot be stepped on or tripped over.

- If an extension cord is used with this device make sure that the total of the ampere ratings of all products used on this cord does not exceed the extension cord ampere rating. Make sure that the total of all products plugged into the wall outlet does not exceed 15 amperes.

- To help protect your system from sudden, transient increases and decreases in electrical power, use a surge suppressor, line conditioner, or un-interruptible power supply (UPS).

- Position system cables and power cables carefully; Be sure that nothing rests on any cables.

- Never push objects of any kind into or through cabinet slots. They may touch dangerous voltage points or short out parts resulting in a risk of fire or electrical shock.

- Do not attempt to service the device yourself. Refer all servicing to qualified service personnel.

- If the following conditions occur, unplug the device from the wall outlet and bring it to qualified service personnel for repair.
  - The power cord or plug has become damaged or frayed.
  - Liquid has been spilled into the device.
  - The device has been exposed to rain or water.
  - The device has been dropped, or the cabinet has been damaged.
  - The device exhibits a distinct change in performance, indicating a need for service.
  - The device does not operate normally when the operating instructions are followed.

- Only adjust those controls that are covered in the operating instructions. Improper adjustment of other controls may result in damage that will require extensive work by a qualified technician to repair.

- Avoid circuit overloads. Before connecting equipment to a circuit, know the power supply's limit and never exceed it. Always review the electrical specifications of a circuit to ensure that you are not creating a dangerous condition or that one does not already exist. Circuit overloads can cause a fire and destroy equipment.

Rack Mounting

- Before working on the rack, make sure that the stabilizers are secured to the rack, extended to the floor, and that the full weight of the rack rests on the floor. Install front and side stabilizers on a single rack or front stabilizers for joined multiple racks before working on the rack.

- Always load the rack from the bottom up, and load the heaviest item in the rack first.

- Make sure that the rack is level and stable before extending a device from the rack.

- Do not overload the AC supply branch circuit that provides power to the rack. The total rack load should not exceed 80 percent of the branch circuit rating.

- Make sure that all equipment used on the rack – including power strips and other electrical connectors – is properly grounded.

- Ensure that proper airflow is provided to devices in the rack.

- Ensure that the operating ambient temperature of the rack environment does not exceed the maximum ambient temperature specified for the equipment by the manufacturer.

- Do not step on or stand on any device when servicing other devices in a rack.

Technical Support

International

◆ For online technical support – including troubleshooting, documentation, and software updates: **http://eservice.aten.com**

◆ For telephone support, see *Telephone Support*, page iv:

North America

Email Support		support@aten-usa.com
Online Technical Support	Troubleshooting Documentation Software Updates	http://www.aten-usa.com/support
Telephone Support		1-888-999-ATEN ext 4988

When you contact us, please have the following information ready beforehand:

◆ Product model number, serial number, and date of purchase.

◆ Your computer configuration, including operating system, revision level, expansion cards, and software.

◆ Any error messages displayed at the time the error occurred.

◆ The sequence of operations that led up to the error.

◆ Any other information you feel may be of help.

Specifications

	VM5404HA	VM5808HA
Video Input		
Interface	4 × HDMI Type A Female (Black)	8 × HDMI Type A Female (Black)
Impedance	100 Ω	
Max. Distance	5.0 m	
Video Output		
Interface	4 × HDMI Type A Female (Black)	8 × HDMI Type A Female (Black)
	Array Mode: 1 × HDMI Type A Female (Black)	
Impedance	100 Ω	
Max. Distance	15 m	
Video		
Max. Data Rate	6.75 Gbps (2.25 Gbps per Lane)	
Max. Pixel Clock	225 MHz	
Compliance	HDMI (3D, Deep Color) HDCP 1.4 Compatible Consumer Electronics Control (CEC)	
Max. Resolution	Up to 1080p	
Max. Distance	Up to 15 m	
Audio		
Output	1 × Mini Stereo Jack Female (Green)	
Control		
RS-232	Connector: 1 × DB-9 Female (Black) Baud Rate: 19200, Data Bits: 8, Stop Bits:1, Parity: No, Flow Control: No	
Ethernet	1 × RJ-45 Female	
EDID Settings		
EDID Mode	Default / Port1 / Remix / Customized (EDID Wizard support)	
Power		
Connector	1 × 3-Prong AC Socket	
Max. Input Power Rating	100-240VAC; 50-60Hz; 1.0A	

	VM5404HA	**VM5808HA**
Power Consumption	AC110V; 35.7W; 167BTU/h AC220V; 34.9W; 164BTU/h	AC110V; 58.1W; 272BTU/h AC220V; 56.6W; 265BTU/h
	Note: ◆ The measurement in Watts indicates the typical power consumption of the device with no external loading. ◆ The measurement in BTU/h indicates the power consumption of the device when it is fully loaded.	
Environment		
Operating Temp.	0–40ºC	
Storage Temp.	-20–60ºC	
Humidity	0–80% RH, Non-condensing	
Physical Properties		
Housing	Metal	
Weight	5.12 kg (11.28 lb)	5.54 kg (12.2 lb)
Dimensions (L x W x H)	43.24 × 37.82 × 4.40 cm (17.02 × 14.89 × 1.73 in.)	

Telnet Operation

To connect to VM5404HA / VM5808HA via Telnet, follow the steps in *Connecting to the Matrix Switch via Telnet*, page 83.

Configuration Menu

Once a Telnet connection to the VM5404HA / VM5808HA is established, the device's text-based Configuration Menu comes up, with the following items:

1. H – Call up the command list for help

Command list:

GT – Set gateway address

IM – Set IP subnet mask

IP – Set IP address

LO – Load connections from profile *nn*

PW – Change password

RI– Read what input is connected to *nn* output

RO – Read what output is connected to *nn* input

SB – Set the serial port baud rate

SS – Switch input to specified port

SV – Save the current connections into profile *nn*

TI – Set timeout

VR – Software version information

Ctrl-Q – Quit

2. GT – Set gateway address

GT

Old gateway address: 192.168.0.1

New gateway address:

3. IM – Set IP subnet mask

IM

Old IP subnet mask: 255.255.255.0

New IP subnet mask:

4. IP – Set IP address

    IP

      Old IP address: 192.168.0.60

      New IP address:

5. LO – Load connections from profile

    LO 01

      Load profile 01 OK.

6. PW – Change password

    PW

      Old password: ********

      New password:

7. RI – Read what input is connected to *nn* output

    RI 01

      Input port 02 04 08 is connected to output port 01

8. RO – Read what output is connected to *nn* input

    RO 01

      Output port 02 is connected to input port 01

9. SB – Set serial port baud rate

    SB 96

      Serial port baud rate is set to 9600

10. SS – Switch input to specified output

    SS 01,03

      Switch input 01 to output 03

11. SV – Save the current connections into a profile

SV 01

Save the current connections into profile 01

12. TI – Set timeout

TI 30

Set 30 minute timeout

13. VR – Software version information

VR

Software version 1.0.

ATEN Warranty Policy

The warranty policy may vary by product category and region of purchase. For details, please visit ATEN's official website, select your purchase counties/regions and then go to the Support Center, or contact your local ATEN sales representative for further assistance.