EMC Information

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.

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

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.

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:

<table>
<thead>
<tr>
<th>International</th>
<th>886-2-8692-6959</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>86-400-810-0-810</td>
</tr>
<tr>
<td>Japan</td>
<td>81-3-5615-5811</td>
</tr>
<tr>
<td>Korea</td>
<td>82-2-467-6789</td>
</tr>
<tr>
<td>North America</td>
<td>1-888-999-ATEN ext 4988</td>
</tr>
<tr>
<td></td>
<td>1-949-428-1111</td>
</tr>
</tbody>
</table>

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.
### Package Contents

The VM6404H / VM6809H package consists of:

- 1 VM6404H / VM6809H 4x4 / 8x9 4K HDMI Matrix Switch with Scaler
- 1 Power Cord
- 1 IR Remote Control (VM6404H only)
- 1 IR Receiver (VM6404H only)
- 1 Mounting Kit
- 1 User Instructions*

Check to make sure that all the components are present and that nothing got damaged in shipping. If you encounter a problem, contact your dealer.

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

* Features may have been added to the VM6404H / VM6809H since this manual was published. Please visit our website to download the most up-to-date version.
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2. IP – Set network settings
3. LO – Load connections from profile
4. PW – Change password
5. RI – Read what input is connected to nn output
6. RO – Read what output is connected to nn input
7. SB – Set serial port baud rate
8. SS – Switch input to specified output
9. SV – Save the current connections into a profile
10. TI – Set timeout
11. VR – Software version information

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About this Manual

This User Manual is provided to help you get the most from your VM6404H / VM6809H 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 VM6404H / VM6809H 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 VM6404H / VM6809H installation.

**Chapter 3 Front Panel Configuration**, explains the fundamental concepts involved in operating the VM6404H / VM6809H at the local site via the front panel LCD display using pushbuttons.

**Chapter 4 Browser Operation**, provides a complete description of the VM6404H / VM6809H's Browser Graphical User Interface (GUI), and how to use it to remotely configure and operate the VM6404H / VM6809H.

**Chapter 5 Mobile Control**, introduces you to the Video Matrix Control app and provides details on its installation requirements.

**Chapter 6 RS-232 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 VM6404H / VM6809H.
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.

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:

<table>
<thead>
<tr>
<th></th>
<th><a href="http://www.aten.com">http://www.aten.com</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>International</td>
<td></td>
</tr>
<tr>
<td>North America</td>
<td><a href="http://www.aten-usa.com">http://www.aten-usa.com</a></td>
</tr>
</tbody>
</table>
Chapter 1
Introduction

Overview

The ATEN VanCryst VM6404H / VM6809H 4x4 / 8x9 4K HDMI Matrix Switch with Scaler 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 4/9 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 VM6404H / VM6809H features Seamless Switch™, which employs FPGA matrix system architecture to seamlessly switch between multiple sources and multiple displays. With EDID Expert technology, the VM6404H / VM6809H 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 in multiple resolutions up to 4K.

You can easily configure the VM6404H / VM6809H via the front panel LCD display and pushbuttons, and through the use of an IR Remote Control (VM6404H only). The LCD provides a quick view of all port connections, and lets operators access the unit’s built-in configuration utility.

Furthermore, the VM6404H / VM6809H 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 VM6404H / VM6809H 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 VM6404H / VM6809H’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.

The VM6404H / VM6809H 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

- 4 x 4 / 8 x 9 HDMI input/output connections
- 4K Scaler – features a 4K video scaling function to convert input resolutions to the display’s native resolutions
- Seamless Switch™ Technology – ATEN FPGA engine unifies video formats to provide continuous video streams, real-time switching and stable signal transmissions*
- Video Wall - allows you to create custom video wall layouts via intuitive web GUI*
- EDID Expert™ – selects optimum EDID settings for smooth power-up, high-quality display and use of the best video resolution across different screens
- FrameSync – prevents image tearing by synchronizing the scaler output frame rate to the input signal frame rate (VM6809H)
- HDMI (3D, Deep color, 4K); HDCP 2.2 compatible
- Audio-enabled, HDMI audio can be extracted to stereo audio (VM6809H)
- Multiple Control Methods – system management via front-panel pushbuttons, IR (VM6404H only), RS-232 and Ethernet (Telnet / Web GUI) connections
- Supports free mobile control using the Video Matrix Control App
- ESD protection for HDMI
- Rack-mountable (1U design)

Note:

When Seamless Switch™ is enabled, mind the following:

- Video outputs will not display 3D, Deep Color, or interlace (i.e., 1080i) resolutions correctly. To use these features, make sure to first disable Seamless Switch™.
- Videos may not display within range, in which case make sure to adjust the display settings on your device.
Requirements

The following devices are required for a complete VM6404H / VM6809H 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.
Source Device Operating Systems
Supported operating systems are shown in the table below:

<table>
<thead>
<tr>
<th>OS</th>
<th>Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows</td>
<td>2000 and higher</td>
</tr>
<tr>
<td>Linux RedHat</td>
<td>6.0 and higher</td>
</tr>
<tr>
<td>SuSE</td>
<td>8.2 and higher</td>
</tr>
<tr>
<td>Mandriva (Mandrake)</td>
<td>9.0 and higher</td>
</tr>
<tr>
<td>UNIX AIX</td>
<td>4.3 and higher</td>
</tr>
<tr>
<td>FreeBSD</td>
<td>3.51 and higher</td>
</tr>
<tr>
<td>Sun</td>
<td>Solaris 8 and higher</td>
</tr>
<tr>
<td>Novell Netware</td>
<td>5.0 and higher</td>
</tr>
<tr>
<td>Mac</td>
<td>OS 9 and higher</td>
</tr>
<tr>
<td>DOS</td>
<td>6.2 and higher</td>
</tr>
</tbody>
</table>

Browsers
Recommended web browsers for VM6404H are shown in the table below:

<table>
<thead>
<tr>
<th>OS</th>
<th>Java Version</th>
<th>Browser</th>
<th>Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows 8.1</td>
<td>V1.8.0_60</td>
<td>Chrome</td>
<td>45.0.2454.85 m</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Firefox</td>
<td>40.0.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Safari</td>
<td>5.1.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Opera</td>
<td>31.0.1889.174</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IE11</td>
<td>11</td>
</tr>
<tr>
<td>Windows 2012 R2 (64bit)</td>
<td>V1.8.0_60 (64bit)</td>
<td>IE11</td>
<td>11 (64bit)</td>
</tr>
<tr>
<td>Windows 2008 R2 (64bit)</td>
<td>V1.8.0_60 (64bit)</td>
<td>IE8</td>
<td>8</td>
</tr>
<tr>
<td>Windows 7 SP1 (64bit)</td>
<td>V1.8.0_60 (64bit)</td>
<td>IE10</td>
<td>10 (64bit)</td>
</tr>
<tr>
<td>Windows XP</td>
<td>V1.8.0_60</td>
<td>IE8</td>
<td>8</td>
</tr>
<tr>
<td>CentOS 7.0 (64Bit)</td>
<td>V1.8.0_60 (64bit)</td>
<td>Firefox</td>
<td>40.0.3</td>
</tr>
<tr>
<td>Ubuntu 12.04</td>
<td>V1.8.0_60</td>
<td>Chrome</td>
<td>45.0.2454.85</td>
</tr>
<tr>
<td>Solaris 11 (64bit)</td>
<td>V1.8.0_25</td>
<td>Firefox</td>
<td>33</td>
</tr>
<tr>
<td>Mac 10.10</td>
<td>V1.8.0_25</td>
<td>Safari</td>
<td>8</td>
</tr>
</tbody>
</table>
Recommended web browsers for **VM6809H** are shown in the table below:

<table>
<thead>
<tr>
<th>OS</th>
<th>Java Version</th>
<th>Browser</th>
<th>Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows 10 (64bit)</td>
<td>V1.8.0_144 (64bit)</td>
<td>Chrome</td>
<td>60.0.3112.113 (64bit)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Firefox</td>
<td>54.0.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Opera</td>
<td>46.0.259.57</td>
</tr>
<tr>
<td>Ubuntu 16.04 (64bit)</td>
<td>V1.8.0_121 (64bit)</td>
<td>Chrome</td>
<td>60.0.3112.78 (64bit)</td>
</tr>
<tr>
<td>Solaris 11 (64bit)</td>
<td>V1.8.0_25</td>
<td>Firefox</td>
<td>30</td>
</tr>
<tr>
<td>Mac 10.10</td>
<td>V1.8.0_25</td>
<td>Safari</td>
<td>10.10.1</td>
</tr>
</tbody>
</table>
Components

VM6404H Front View

<table>
<thead>
<tr>
<th>No.</th>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>LCD Display</td>
<td>The LCD Display gives a quick view of all port connections, and shows the various options for configuring and operating the VM6404H. For full details, see Main Screen, page 19.</td>
</tr>
<tr>
<td>2</td>
<td>Input Pushbuttons</td>
<td>These pushbuttons refer to the HDMI Input ports found on the VM6404H rear panel. Press to select the Input port. These pushbuttons may also correspond to menu options, connection profiles (P1–P4) and so on. <strong>Note:</strong> The INPUT (1–4) front panel pushbuttons have built-in LEDs that light to indicate they have been selected.</td>
</tr>
<tr>
<td>3</td>
<td>Output Pushbuttons</td>
<td>These pushbuttons refer to the HDMI Output ports found on the VM6404H rear panel. Press to select the Output port. These pushbuttons may also correspond to connection profiles (P5–P8). <strong>Note:</strong> The OUTPUT (1–4) front panel pushbuttons have built-in LEDs that light to indicate they have been selected.</td>
</tr>
<tr>
<td>4</td>
<td>Prev / Next Pushbuttons</td>
<td>These pushbuttons allow you to cycle through the menu options on the LCD display.</td>
</tr>
<tr>
<td>5</td>
<td>Function Pushbuttons</td>
<td>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 17. <strong>Note:</strong> The MENU and PROFILE front panel pushbuttons have built-in LEDs that light to indicate they have been selected.</td>
</tr>
</tbody>
</table>
### VM6404H Rear View

<table>
<thead>
<tr>
<th>No.</th>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Power Socket</td>
<td>This is a standard 3-pin AC power socket. The power cord from an AC source plugs in here.</td>
</tr>
<tr>
<td>2</td>
<td>Power Switch</td>
<td>This is a standard rocker switch that powers the unit on and off.</td>
</tr>
<tr>
<td>3</td>
<td>Grounding Terminal</td>
<td>The grounding wire attaches here. See <em>Grounding</em>, page 13, for further details.</td>
</tr>
<tr>
<td>4</td>
<td>HDMI Input Ports</td>
<td>The cables from your HDMI source devices plug into these ports.</td>
</tr>
<tr>
<td>5</td>
<td>HDMI Output Ports</td>
<td>The cables from your HDMI display devices plug into these ports.</td>
</tr>
<tr>
<td>6</td>
<td>IR Port</td>
<td>Connect the IR Receiver unit included with your product via this 3.5 mm Mini Stereo Jack.</td>
</tr>
<tr>
<td>7</td>
<td>RS-232 Serial Port</td>
<td>Connect a computer or high-end system controller via this serial port.</td>
</tr>
<tr>
<td>8</td>
<td>Ethernet Port</td>
<td>In order to access the VM6404H’s Browser Graphical User Interface (GUI), the VM6404H must be connected to your network. The cable that connects the VM6404H to your LAN plugs in here. See <em>Cable Connection</em>, page 14, for further details</td>
</tr>
</tbody>
</table>
## VM6809H Front View

<table>
<thead>
<tr>
<th>No.</th>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>LCD Display</td>
<td>The LCD Display gives a quick view of all port connections, and shows the various options for configuring and operating the VM6809H. For full details, see <em>Main Screen</em>, page 19.</td>
</tr>
</tbody>
</table>
| 2   | Input Pushbuttons    | These pushbuttons refer to the HDMI Input ports found on the VM6809H rear panel. Press to select the Input port. These pushbuttons may also correspond to menu options, connection profiles (P1–P8) and so on.  
**Note:** The INPUT (1–8) front panel pushbuttons have built-in LEDs that light to indicate they have been selected. |
| 3   | Output Pushbuttons   | These pushbuttons refer to the HDMI Output ports found on the VM6809H rear panel. Press to select the Output port. These pushbuttons may also correspond to connection profiles (P9–P17).  
**Note:** The OUTPUT (1–9) front panel pushbuttons have built-in LEDs that light to indicate they have been selected. |
| 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 17.  
**Note:** The *MENU* and *PROFILE* front panel pushbuttons have built-in LEDs that light to indicate they have been selected. |
## VM6809H Rear View

<table>
<thead>
<tr>
<th>No.</th>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Power Socket</td>
<td>This is a standard 3-pin AC power socket. The power cord from an AC source plugs in here.</td>
</tr>
<tr>
<td>2</td>
<td>Power Switch</td>
<td>This is a standard rocker switch that powers the unit on and off.</td>
</tr>
<tr>
<td>3</td>
<td>Grounding Terminal</td>
<td>The grounding wire attaches here. See <em>Grounding</em>, page 13, for further details.</td>
</tr>
<tr>
<td>4</td>
<td>Audio Output Port</td>
<td>The audio output port allows you to extract HDMI audio to stereo audio. The cable from a speaker plugs in here.</td>
</tr>
<tr>
<td>5</td>
<td>HDMI Input Ports</td>
<td>The cables from your HDMI source devices plug into these ports.</td>
</tr>
<tr>
<td>6</td>
<td>HDMI Output Ports</td>
<td>The cables from your HDMI display devices plug into these ports.</td>
</tr>
<tr>
<td>7</td>
<td>RS-232 Serial Port</td>
<td>Connect a computer or high-end system controller via this serial port.</td>
</tr>
<tr>
<td>8</td>
<td>Ethernet Port</td>
<td>In order to access the VM6809H’s Browser Graphical User Interface (GUI), the VM6809H must be connected to your network. The cable that connects the VM6809H to your LAN plugs in here. See <em>Cable Connection</em>, page 14, for further details</td>
</tr>
</tbody>
</table>
IR Remote Control  
(for VM6404H only)

<table>
<thead>
<tr>
<th>No.</th>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Power ON/OFF</td>
<td>Use the ON and OFF pushbuttons to turn the Output displays on or off – by individual port, or all ports. (see IR Remote Control Operation, page 38)</td>
</tr>
<tr>
<td>2</td>
<td>Output Pushbuttons 1–8</td>
<td>Press Output display pushbuttons 1–8 to select the Output display you want to configure (see IR Remote Control Operation, page 38).</td>
</tr>
<tr>
<td>3</td>
<td>Input Pushbuttons 1–8</td>
<td>Press Input source pushbuttons 1–8 to select the Input source you want to display on a selected output (see IR Remote Control Operation, page 38).</td>
</tr>
</tbody>
</table>

**Note:** The VM6404H’s IR remote control only supports use the 1-4 Input and 1-4 Output pushbuttons.
Chapter 2
Hardware Setup

1. Important safety information regarding the placement of this device is provided on page 117. 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 VM6404H / VM6809H 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 6 Phillips head hex screws supplied with the Mounting Kit to screw the rack mounting brackets onto the front of the unit (VM6404H uses 6 screws and VM6809H uses 8 to fix the rack mounting kit).

VM6404H
2. Position the unit in the front of the rack and align the holes in the mounting brackets with the holes in the rack.

3. Screw the mounting brackets to the rack.
Grounding

To prevent damage to your installation, it is important that all devices are properly grounded.

1. Use a grounding wire to ground the VM6404H / VM6809H by connecting one end of the wire to the grounding terminal, and the other end of the wire to a suitable grounded object.

2. Make sure that all devices in your VM6404H / VM6809H installation are properly grounded.
Cable Connection

Installation of the VM6404H / VM6809H is simply a matter of connecting the appropriate cables. Refer to the installation diagram on the following page (the numbers in the diagram correspond to the steps below), and do the following:

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 / 8 HDMI video sources to the **HDMI Input** ports
3. Connect up to 4 / 9 HDMI display devices to the **HDMI Output** ports
4. Connect the IR Receiver into the **IR** port (for VM6404H).
5. (Optional) To access the features in the web GUI or use Video Matrix Control App, plug a Cat 5e cable from the LAN into the VM6404H / VM6809H’s **Ethernet** port.
6. (Optional) If you are using the serial control function, use an appropriate RS-232 serial cable to connect the computer or serial controller to the VM6404H / VM6809H’s female **RS-232 Serial** port.
7. Plug the power cord supplied with the package into the VM6404H / VM6809H’s 3-prong AC socket, and then into an AC power source.
8. (Optional) To extract HDMI audio, connect a speaker to the Audio Output Port (for VM6809H).
9. Power on the VM6404H / VM6809H and all devices in the installation.
Installation Diagram

VM6404H

VM6809H
Chapter 3
Front Panel Configuration

Overview

The VM6404H / VM6809H can be configured and operated locally via the front panel LCD/pushbuttons and IR Remote Control (for VM6404H only); 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 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 6.

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 23).
- Use the **PROFILE** pushbutton to switch between the connection profiles which have been added to the Profile List (see *Profile List*, page 43). Pressing this pushbutton for longer than 3 seconds displays the Save to a Profile page (see *Save to a Profile*, page 35).
- 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 (1-4 or 1-8) / OUTPUT (1-4 or 1-9)** pushbuttons to select the Input/Output port. These pushbuttons may also correspond to menu options, connection profiles, and so on.
- The VM6404H provides **Prev** / **Next** pushbuttons to navigate the menus.
- Use pushbuttons **7/8** (Prev/Next) to navigate the VM6809H menus.
Enter Password

Upon VM6404H / VM6809H 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 VM6404H / VM6809H 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 19).

Additionally, the Password Screen appears if the VM6404H / VM6809H has been configured to require a password for Front Panel operation (see Security Mode, page 33).

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 (1-4 or 1-8) 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: 1. The VM6404H / VM6809H password can be any 4-digit combination between 1111 to 8888 (VM6809H) or 1111 to 4444 (VM6404H). The default password is 1234.
2. 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.
3. If Password option is Enabled (see Security Mode, page 33), the LCD display time-out is 5 minutes by default.
Main Screen

The Main Screen shows the Input ports (1-4 or 1-8) in the top row, which are tied to the Output ports shown in sequential order (1-4 or 1-9) at the bottom row.

- The front panel pushbutton label corresponds to the Input ports (1-4 or 1-8) and Output ports (1-4 or 1-9) on the unit’s rear panel.
- Use the Menu pushbutton to view the LCD Menu (see LCD Menu Organization, page 23).
- Use the Profile pushbutton to switch between profile connections (see Profile List, page 43).

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

Use the Input Port pushbuttons to select the Input port you want to configure.

To select which input source displays on each output port, do the following:

1. Press any Input port pushbutton. The Output port LED(s) tied to the said Input port will begin to flash. Available output port LED(s) will light up (steady).

   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.
   
   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 will flash.

   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 LED will also begin to flash (0.5 sec on, 0.2 sec off). 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:** 1. Pressing an Input port a second time deselects it.

   2. Input ports that are not configured or tied to any output port do not in the LCD screen.

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

   4. After 10 seconds of inactivity, all the LEDs turn off.
Output Port Selection

Use the Output Port pushbuttons to select the Output port you want to configure.

To select which output display corresponds to each input source device, do the following:

1. Press any Output port pushbutton.
   In the example below, Output port 1 pushbutton has been pressed. Available Input ports light up. Because no Input LEDs are flashing, no ports have already been assigned to Output port 1.

2. If an Output port pushbutton is pressed a second time, it is deselected and the LED turns off.

3. To connect the selected Output port(s) to an Input port, press the Input port pushbutton to which you want the Output port(s) tied. The newly selected Input port LED flashes (0.5 sec on, 0.2 sec off), and the LCD information is updated.
   In the example below, pressing Input port 2 ties it to Output ports 2, 3 and 4.
4. To switch Output ports 2, 3 and 4 to another Input port (and disconnect it from Input port 2), press another Input port pushbutton to which you want them tied.

In the example below, Input port 3 has been pressed and is now connected to Output ports 2, 3 and 4.

Note: 1. Pressing an Output port a second time deselects it.

2. 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.

3. After 10 seconds of inactivity, all the LEDs turn off.
# LCD Menu Organization

The VM6404H / VM6809H has a built-in configuration utility via the front panel LCD, which can be controlled by pressing the **MENU** and front panel Input pushbuttons (1-4 or 1-8). User can cycle through the menu options, starting from IP Setting page, in the order shown in the table below:

<table>
<thead>
<tr>
<th><strong>Menu Page</strong></th>
<th><strong>Sub-Menu Page(s)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>IP Setting</td>
<td>IP Address</td>
</tr>
<tr>
<td></td>
<td>Subnet Mask</td>
</tr>
<tr>
<td></td>
<td>Gateway</td>
</tr>
<tr>
<td>Serial Port Setting</td>
<td>Baud Rate</td>
</tr>
<tr>
<td>Operation Mode</td>
<td>EDID</td>
</tr>
<tr>
<td></td>
<td>CEC</td>
</tr>
<tr>
<td></td>
<td>OSD</td>
</tr>
<tr>
<td>Output Status</td>
<td>Video</td>
</tr>
<tr>
<td></td>
<td>Audio Extract</td>
</tr>
<tr>
<td></td>
<td>Mute</td>
</tr>
<tr>
<td></td>
<td>Output Resolutions</td>
</tr>
<tr>
<td>Security Mode</td>
<td>Mode</td>
</tr>
<tr>
<td></td>
<td>Password Enable</td>
</tr>
<tr>
<td></td>
<td>Lock Screen</td>
</tr>
<tr>
<td></td>
<td>Change Password</td>
</tr>
<tr>
<td></td>
<td>Save to a Profile</td>
</tr>
<tr>
<td>Save to a Profile</td>
<td>Save to a Profile No.</td>
</tr>
</tbody>
</table>

**Note:**
1. The highlighted values are the default settings of the VM6404H / VM6809H.
2. The Audio Extract is only supported by VM6809H.
Menu Pushbutton

Press the MENU pushbutton to switch between the Main Screen and LCD Menu page. When the Menu is active, the MENU pushbutton’s built-in LED lights up:

From the Menu page:
- Press 1 to go to the IP Setting page (see IP Setting, page 24)
- Press 2 to go to the Serial Port Setting page (see Serial Port Setting, page 26)
- Press 8 or Next to go to the next page(s) for the sub-menu pages
- Press Menu to return to the Main Screen

IP Setting

The IP Setting page displays the VM6404H / VM6809H’s IP configuration. The values in the LCD Menu are read-only and can be edited via the Browser GUI (Network, page 73).

IP Address / Subnet Mask

To view the VM6404H / VM6809H’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.

Note: The VM6404H / VM6809H’s 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 to return to the Menu page.
4. Press Cancel to return to the previous page without saving.


**Gateway**

To view the VM6404H / VM6809H’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 Address Display]

**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 go back a level, return to the initial screen, or exit.
Serial Port Setting
To configure the VM6404H / VM6809H’s baud rate for its serial port connection, select Serial Port Setting from the Menu page.

Baud Rate
To set the VM6404H / VM6809H’s baud rate, do the following:

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

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

Baud Rate options are:

- 1: 9600
- 2: 19200 (in use)
- 3: 38400
- 4: 115200

**Note:** The default baud rate is 19200.

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

4. Press **Cancel** to go back a level, return to the initial screen, or exit.
Chapter 3. Front Panel Configuration

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

- EDID (Extended Display Identification Data) is used to have the VM6404H / VM6809H 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 VM6404H / VM6809H’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.

<table>
<thead>
<tr>
<th>EDID Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: Port 1</td>
<td>The EDID from port1 is passed to all video sources.</td>
</tr>
<tr>
<td>2: Default</td>
<td>The default EDID is passed to all video sources.</td>
</tr>
<tr>
<td>3: Remix</td>
<td>Uses the EDID of each connected display according to its connection when the VM6404H / VM6809H is first powered on, or immediately after pressing 3 to select the Remix option.</td>
</tr>
<tr>
<td>4: Customized</td>
<td>This mode features an EDID Wizard that allows user-defined EDID configurations for optimum output. See Customized EDID Parameters, page 78.</td>
</tr>
</tbody>
</table>

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

4. Press **Cancel** to go back a level, return to the initial screen, or exit.

**CEC**

To configure the CEC setting, do the following:

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

2. Press pushbuttons (1-4 or 1-9) to enable (ON) or disable (NA) the CEC feature for the output port. If the port does not support CEC, an NA is shown.

**Note:** The default CEC setting is NA.

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

4. Press **Cancel** to go back a level, return to the initial screen, or exit.
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 VM6404H / VM6809H’s front panel, IR remote control 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:

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

3. Press pushbuttons (1-4 or 1-9) to enable (ON) or disable (NA) the OSD feature for the output port.

Note: The default OSD setting is On.

4. Press Menu to return to the Menu page.

5. Press Cancel to go back a level, return to the initial screen, or exit.
Output Status
To configure the **Output Status** 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**:

   ![Menu page with OSD and Output Status options]

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

   ![Output Status page with Video and Output Resolution options]

3. Press pushbuttons (1-4 or 1-9) to enable (**ON**) or disable (**NA**) the video/audio of the output port.

   ![Output Status page with output settings]

   **Note:** The default Output Status setting is **On**.

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

5. Press **Cancel** to go back a level, return to the initial screen, or exit.

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**:

   ![Menu page with OSD and Output Status options]

   ![Output Status page with Video and Output Resolution options]

   ![Output Status page with output settings]

   **Note:** To configure the **Output Resolution** settings, you'll need to select the appropriate video source (e.g., HDMI, DVI, etc.) and then adjust the resolution settings for each output port.
2. **VM6404H:** From the Output Status page, press 2 to select Output Resolution.

3. Press pushbuttons (1-4 or 1-9) to select an output port whose resolution will be changed.

4. Available options include: Native Resolution, 560x360@60HZ, 720x576@50HZ, 768x480@60HZ, 1024x768@60HZ, 1280x720@50HZ, 1280x720@60HZ, 1920x1080@50HZ, 1920x1080@60HZ, 1920x1080@30HZ, 1280x800@60HZ, 1280x1024@60HZ, 1366x768@60HZ, 1400x1050@60Hz, 1600x900@60HZ, 1600x1200@60HZ, 1920x1200@60HZ, 1920x1080@50HZ, 1920x1080@60HZ, 2560x1080@60HZ, 3440x1440@50HZ, 3840x2160@24HZ, 3840x2160@25HZ, 3840x2160@30HZ, 4096x2160@24HZ, 4096x2160@25HZ, 4096x2160@30HZ, 3840x2160@50HZ 4:2:0, 3840x2160@60HZ 4:2:0, 4096x2160@50HZ 4:2:0, and 4096x2160@60HZ 4:2:0.

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

6. Press **Cancel** to return to the previous step without saving.
To configure the **Audio Extract** settings for VM6809H, do the following:

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

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

3. Press pushbuttons (1-8) to select an input port to the stereo audio output. To mute the audio, press the PROFILE pushbutton until it indicates ON.
Security Mode
The Security Mode page allows users to manage the VM6404H / VM6809H’s security-related settings. Three security modes are available: None, Password Enable and Lock Screen. The VM6404H / VM6809H’s password can also be changed here.

To configure the VM6404H / VM6809H’s password 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 VM6404H / VM6809H’s security mode, press pushbutton 1 in Security Mode.

2. In the Mode menu, to disable security settings, press pushbutton 1. The menu will then return to Security Mode. To require a password after the LCD display times out or is powered off/on, press pushbutton 2. The menu will then return to the home screen.

Note: If Password is Enabled, the LCD display’s default time-out is 5 minutes. The VM6404H / VM6809H’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.

5. Press **Cancel** to return to the previous step without saving.

**Change Password**

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

2. In the Old Password field, the cursor flashes at the first digit. Enter the old password (see *Enter Password*, page 18). If the old password is entered correctly, you can proceed to the next step.

   ![Old Password](image)

   **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: 1111–4444 for VM6404H; 1111–8888 for VM6809H.

   ![New Password](image)

4. Re-enter the new password in the following screen. The new password is applied by the VM6404H / VM6809H immediately.

   ![Re-enter New Password](image)

   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.

6. Press **Cancel** to return to the previous step without saving.
Save to a Profile

The switch allows users to store up to 8 (VM6404H; numbered P1-P8) or 17 (VM6809H; numbered P1-P17) 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 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.

VM6404H 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

VM6809H Options are P1–P17 (when saving a profile via the LCD), where:
- Input port pushbuttons 1–8 correspond to Profile P1 to P8
- Output port pushbuttons 1–9 correspond to Profile P9 to P17

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

4. Press **Menu** to return to the Menu page,

5. Press **Cancel** to return to the previous step without saving.

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

The final option in the menu allows users to play or stop the selected profile schedule (to learn more about switching between connection profiles, see Profile Pushbutton, page 37).

To play or stop a profile, 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 2 to play the selected profile schedule.

2. Press the Menu pushbutton to access the Menu page, then 8 or Next to navigate to the next pages. Press pushbutton 2 to stop the selected profile schedule.

Turn Video Wall Off

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

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 43).

If a Profile is in use, its profile number (P1-P8 or P1-P17) 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 P8) or (P1 to P16). Note that:
  - Input ports 1-4 or 1-8 correspond to Profile P1 to P4 or P1 to P8
  - Output ports 1-4 or 1-9 correspond to Profile P5 to P8 or P9 to P17
    (VM6404H: where Output Port 1=Profile 5, Output Port 2=Profile 6... Output Port 4=Profile 8; VM6809H: where Output Port 1=Profile 9, Output Port 2=Profile 10... Output Port 9=Profile 17)

The selected pushbutton’s light flashes, and the VM6404H / VM6809H 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 the next profile in Profile Scheduling (see page 51), not the next 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 VM6404H / VM6809H 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 19) or from the Connections page of the Browser GUI (see Connection Profiles, page 53). Additionally, the Profile List can be configured via the Profile page of the Browser GUI (see Profile List, page 43).
IR Remote Control Operation

The IR remote control (see page 10) included with the VM6404H can be used to:

- change the Input source of any Output display
- power on/off individual Output displays; or
- power on/off all Output displays simultaneously

Before using the remote control, a user must first plug the IR External Receiver into the rear panel of the VM6404H and place the receiver where the IR signal can be reached (see IR Port, page 7).

Change the Input source of an Output display

To change the Input source of an Output display, using the remote control, do the following:

1. Press the **Output** port number (1-4) you want to change.
2. Within 2 seconds press the **Input** port number (1-4) you want the Output port to display.*
3. Repeat steps 1-2 to change additional ports.

*For the change to occur the Input number must be pressed within 2 seconds of pressing the Output number.

Power on/off individual Output displays

To power on/off individual Output displays, using the remote control, do the following:

1. Press the **Output** port number (1-4) you want to power on/off.
2. Within 2 seconds press the **ON** or **OFF** pushbutton.*
3. Repeat steps 1-2 to change the power status back on/off.

*If the **ON** or **OFF** pushbutton is pressed after 2 seconds of pressing the Output port number, all the displays are powered on or off instead of just the intended Output port.
Power on/off all Output displays

To power on/off all Output displays simultaneously, with the remote control, do the following:

1. Press the ON or OFF pushbutton.*

2. Repeat step 1 to simultaneously change back the power status of all Output ports, to on or off, respectively.

*The ON or OFF pushbuttons bring all displays to the same power status, regardless of the individual power statuses.
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Chapter 4
Browser Operation

Overview

The VM6404H / VM6809H 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 VM6404H / VM6809H 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 VM6404H / VM6809H’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
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 Model information, Import Profiles, Export Profiles, the Settings icon, and the Logout button.

- Click the model number to add a description for the Video Matrix switch that you wish to show after the model number.
- Click Import Profiles or Export Profiles to import or export a configuration file (see page 46).
- Click Settings to enter the System Settings (see page 65).
- 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 (VM6404H) or 17 (VM6809H) 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. For VM6404H, select the profile type:

   ![Profiles](image)

   **Digital Signage**: Select this option for video that is displayed independently on separate monitors (page 53).

   **Video Wall**: Select this option for monitors that are displayed together - tiled or as a large screen (page 56).

(Continues on next page.)
(Continued from previous page.)

3. For VM6809H, select a template and click **Apply** to save your configuration or click **Skip** to enter the Connection Profile (page 53).

![Select Template](image)

4. Configure the input to output connections for a Digital Signage (page 53) or Video Wall (page 56) profile.

**Note:** The settings for VM6809H Digital Signage are combined to the Video Wall screen (page 56).

5. New profiles appear in the **Profile List**, as shown here:

![Profile List](image)

6. Select the profile and click **Apply**.
7. The profile appears in the large **Play** window and the connections start:

---

**VM6404H**

---

**VM6809H**

---

**Note:** More information about Profile List page options are provided on the next page.
**Importing/Exporting a Profile**

To export the VM6404H / VM6809H’s connection profiles, do the following:

1. Click **Export Profiles**. A configuration file will then begin downloading.

To import connection profiles to the VM6404H / VM6809H, 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.

VM6404H

VM6809H
Profile

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apply</td>
<td>Click <strong>Apply</strong> to put the profile in the Play window. This allows you to start the profile connections.</td>
</tr>
<tr>
<td>Edit</td>
<td>Click <strong>Edit</strong> to configure the profile's input to output connections.</td>
</tr>
</tbody>
</table>

Play Window

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>On Sequence</td>
<td><strong>On Sequence</strong> will appear when a profile schedule is playing (see page 51).</td>
</tr>
<tr>
<td>&lt;</td>
<td>Click &lt; to go back to the previous profile in the sequence, when Profile Scheduling is in use. Only available with <strong>On Sequence</strong>.</td>
</tr>
<tr>
<td>&gt;</td>
<td>Click &gt; to advance to the next profile in the sequence, when Profile Scheduling is in use. Only available with <strong>On Sequence</strong>.</td>
</tr>
<tr>
<td>Positioning</td>
<td>Click <strong>Positioning</strong> 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.</td>
</tr>
<tr>
<td>Remove</td>
<td>Removes the profile from the Play window.</td>
</tr>
<tr>
<td>Edit/Change Input</td>
<td>Click <strong>Edit/Change Input</strong> to configure the profile's input to output connections.</td>
</tr>
</tbody>
</table>
Change Input
Clicking on the **Change Input** button opens a pop-up window with options.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Zoom In/Out]</td>
<td>Click “-“ or “+” to zoom out or zoom in the layout.</td>
</tr>
<tr>
<td>![Fit]</td>
<td>Click to fit the layout screen to the default view.</td>
</tr>
<tr>
<td>![Port List]</td>
<td>Drag from the Port List on the right side and drop on any display of the layout to set/change the input source.</td>
</tr>
<tr>
<td>![Audio Extract]</td>
<td>Use the drop-down menu to select the input source for audio extraction to stereo audio output.</td>
</tr>
<tr>
<td>![Switch to Grid View]</td>
<td>Click to switch the layout view to <strong>Grid View</strong>.</td>
</tr>
<tr>
<td>![Close]</td>
<td>Click to exit the Change Input window.</td>
</tr>
</tbody>
</table>
## Other

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Show OSD</td>
<td>Check <strong>Show OSD</strong> to show text updates that appear on the display when configuration or port changes are made.</td>
</tr>
<tr>
<td>Mute All</td>
<td>Check <strong>Mute All</strong> to mute the audio for all ports.</td>
</tr>
<tr>
<td>Blank All</td>
<td>Check <strong>Blank All</strong> to turn off the video to all displays.</td>
</tr>
</tbody>
</table>
Profile Scheduling

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

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edit</td>
<td>Click to edit profile schedule.</td>
</tr>
<tr>
<td>Play</td>
<td>Click to play profile schedule.</td>
</tr>
<tr>
<td>Stop</td>
<td>Click to stop profile schedule.</td>
</tr>
<tr>
<td>Startup</td>
<td>Click to set a profile as the first to be played in the queue.</td>
</tr>
<tr>
<td>&lt; &gt;</td>
<td>Click to change to next or previous profile when a profile schedule is playing.</td>
</tr>
</tbody>
</table>
After selecting **Edit**, you will be presented with the following options.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Add Profile" /></td>
<td>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.</td>
</tr>
</tbody>
</table>
| ![Pop-up Menu](image) | 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. |
| ![Duration Dropdown](image) | 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. |
Chapter 4. Browser Operation

Connection Profiles

After finishing the settings of Adding/Playing a Profile (see page 43), you are able to configure the connection profiles with inputs and outputs here. There are two types of profiles: Digital Signage and Video Wall. Digital Signage profiles are for displays where video is viewed on separate monitors. Video Wall profiles are for displays that are tiled together, where multiple monitors form one large screen – in various arrangements.

Digital Signage Profile

VM6404H

Each icon represents an output port and the connected display. The large number is the Input port selected for the display. The small number (upper-left corner) is the Output port for the display. Click the icons to select options.

- Select icons to choose the Video Input from the Select Source menu.
- 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 Save to save the profile or Save as to save as a different profile number.
- Click Grid View to use an alternate method for configuring connection profiles (see page 55).

VM6809H

The Digital Signage feature can be set via the Video Wall profile by selecting one or more Output ports and the Video Input source. The settings are the same as VM6404H Digital Signage Profile. The displays of the selected Output ports can be physically installed in different locations for Digital Signage applications.
Output Icon

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output Icon</td>
<td>Click an Output icon(s) to highlight it in green and use the Select Source menu to set the video options (see Select Source below). The large number is the Video Input port selected for the display. The small number (upper-left corner) is the Output port of the display.</td>
</tr>
</tbody>
</table>

Mute / Video

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mute / Video</td>
<td>Click the speaker icon to mute the audio on/off. Click the video icon to turn the video off/on.</td>
</tr>
</tbody>
</table>

Select Source

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select Source</td>
<td>The Select Source menu appears when you click an Output icon.</td>
</tr>
<tr>
<td>Output</td>
<td>Displays the Outputs that are selected for the configuration change.</td>
</tr>
<tr>
<td>Video Input</td>
<td>Use the drop-down menu to select the Video Input. Click Save or Save as to save the changes.</td>
</tr>
<tr>
<td>Radio Button</td>
<td>✤ 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.</td>
</tr>
</tbody>
</table>
Grid View
The Grid View allows you to select the Input to Output connections using a simple grid.

- 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 page 63.
Video Wall Profile

Each blank 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.

**VM6404H** (without Audio Extract)

**VM6809H** (with Audio Extract)

**Video Wall Options**

- Click an icon to choose its **Output** and **Video Input** from the *Display Preference* menu (see page 59).
- Click multiple icons to Group Outputs (see *Grouping*, page 60) 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 48).
- 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.

For VM6809H, two more settings are available on the Profile screen:

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ - ]</td>
<td>Click “-” or “+” to zoom out or zoom in the layout of the Video Wall.</td>
</tr>
<tr>
<td>Grid View</td>
<td>Click to switch the layout view to <strong>Grid View</strong>.</td>
</tr>
</tbody>
</table>
### Number of Displays / Output Order / Bezel Dimensions

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Displays</td>
<td>Use the <em>Horizontal</em> and <em>Vertical</em> drop-down menu 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. Click <strong>Apply</strong> to set the layout.</td>
</tr>
<tr>
<td>Output Order</td>
<td>Automatically assign output ports by selecting one of the following options: Left to right (top to bottom), right to left (top to bottom), top to bottom (left to right) or top to bottom (right to left).</td>
</tr>
<tr>
<td>Bezel Dimension</td>
<td>Use the four boxes to increase/decrease the frame size for each active display.</td>
</tr>
</tbody>
</table>
| 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. |
| Audio Extract   | Use the drop-down menu to select the input source to be extracted to stereo audio output.                                                   |
Null Input

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Null Icon</td>
<td>Click Null Input icons to highlight icons in green and use the Display Preferences menu to set the video options (see Display Preferences, page 61). Select a single icon to set the Output and Video Input for an independent display (see Independent Output, page 59). Select multiple icons and set the Video Input to group displays as one screen (see Grouping, page 60). You must first set the Output port for each icon.</td>
</tr>
</tbody>
</table>

| Drop-down Menu | Use the drop-down menu to select the Output port. |

Independent Output

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent Output</td>
<td>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 61) menu select the Video Input.</td>
</tr>
<tr>
<td>Drop-down Menu</td>
<td>Use the drop-down menu to select the Output port.</td>
</tr>
<tr>
<td>Mute / Video</td>
<td>Click the speaker icon to mute the audio on/off. Click the video icon to turn the video off/on.</td>
</tr>
</tbody>
</table>
Grouping

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grouping</td>
<td>Click multiple icons to Group Outputs (highlighted in green) and click →</td>
</tr>
<tr>
<td>Ungroup</td>
<td>Select a group and click ←</td>
</tr>
</tbody>
</table>

Group

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group</td>
<td>A Group (of Outputs) shares the same Video Input and displays the video together as one large screen. A Group of Outputs:</td>
</tr>
<tr>
<td></td>
<td>- Displays video across multiple monitors to form one screen</td>
</tr>
<tr>
<td></td>
<td>- Icons have the same color and Video Input number.</td>
</tr>
<tr>
<td></td>
<td>- Select a Group and use the Display Preferences menu to select the Video Input.</td>
</tr>
<tr>
<td></td>
<td>- To group outputs see Grouping, page 60.</td>
</tr>
</tbody>
</table>

Mute / Video

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mute / Video</td>
<td>Click the speaker icon to mute the audio on/off.</td>
</tr>
<tr>
<td></td>
<td>Click the video icon to turn the video off/on.</td>
</tr>
</tbody>
</table>

* Indicates the output will display the video tile in multiple screens.
Display Preferences

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display Preferences</td>
<td>Click Output icons for the Display Preferences menu to appear— to select the <strong>Output</strong> and/or <strong>Video Input</strong> port.</td>
</tr>
<tr>
<td><strong>Output</strong></td>
<td>Use the drop-down menu to select the <strong>Output</strong> port (Independent and single Blank icons only).</td>
</tr>
<tr>
<td></td>
<td>If you select multiple displays the output ports selected will appear here. You can use the output icon’s drop-down menu to change the output port for the display.</td>
</tr>
<tr>
<td><strong>Video Input</strong></td>
<td>Use the drop-down menu to select the <strong>Video Input</strong> port.</td>
</tr>
<tr>
<td><strong>Radio Button</strong></td>
<td><strong>Fit Width of Output(s)</strong>: fits the video to the width of the display.</td>
</tr>
<tr>
<td></td>
<td><strong>Fit Height of Output(s)</strong>: fits the video to the height of the display.</td>
</tr>
<tr>
<td></td>
<td><strong>Scale to Whole Output(s)</strong>: fits the video on the entire display.</td>
</tr>
</tbody>
</table>

Video Wall Example
The example below shows a video wall with 4 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 Options*, page 56).
Output Options

The Output Options page is used to configure HDMI Video options. The Output Options page for VM6809H can be found in the Video tab under Settings.

HDMI Video Options

HDMI Video Options allow you to set Seamless Switch™ options which determine how a display performs when the input port is changed.

Note: When Seamless Switch™ is enabled:

1. The Transition, Period and Scale Resolution options can be enabled.
2. Video outputs will not display 3D, Deep Color, or interlace (i.e., 1080i) resolutions correctly. To use these features, first disable Seamless Switch™.
3. 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 to all ports, or the ON/OFF button to enable/disable Seamless Switch™ per port. With Seamless Switch™ enabled, the following options are enabled.

- **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 to all ports, or ON/OFF button to enable/disable Transitions 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: 560x360@60HZ, 720x576@50HZ, 768x480@60HZ, 1024x768@60HZ, 1280x720@50HZ, 1280x720@60HZ, 1920x1080@30HZ, 1280x800@60HZ, 1280x1024@60HZ, 1366x768@60HZ, 1400x1050@60Hz, 1600x900@60HZ, 1600x1200@60HZ, 1920x1200@60HZ, 1920x1080@50HZ, 1920x1080@60HZ, 2560x1080@60HZ, 3440x1440@50HZ, 3840x2160@24HZ, 3840x2160@25HZ, 3840x2160@30HZ, 4096x2160@24HZ, 4096x2160@25HZ, 4096x2160@30HZ, 3840x2160@50HZ 4:2:0, 3840x2160@60HZ 4:2:0, 4096x2160@50HZ 4:2:0, and 4096x2160@60HZ 4:2:0.

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

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

- Click **Save & Apply** to save the profile and put it in the Play window (see page 48).

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

Click the *Settings* link from the Main page for the System Settings to open on the *General* page:

- The *General* page allows you to edit Baud Rate, Language and Fan settings and view device information.
- The *User Account* page allows you to add and edit user accounts.
- The *Port Name* page allows you to name each input and output port.
- The *Network* page allows configuration of the network settings.
- The *EDID* page is used to set the EDID modes.
- The *Maintenance* page is for upgrading, backup, and restoring the device’s firmware.
- The *HDCP* page lets users view and set HDCP key settings.
- The *OSD/CEC* page allows users to control port OSD and CEC settings.
- The *Video* page allows users to set Seamless Switch™ options which determine how a display performs when the input port is changed.
- The *Read Status* page lists the status overview of the Video Matrix Switch, including System Network, Device Info, Video Connection, Audio Connection, CEC, OSD, and Output Resolution.
- Click **Profile List** to return to the Main page.
Chapter 4. Browser Operation

General
The General page has three sections: Fan Status, Device Info and Other.

Serial Setting
- Use the Baud Rate drop-down menu to select a serial port setting.
  - Options include: 9600, 19200, 38400 and 115200.

Fan Status
- This section displays the fan status for Video Matrix Switches.
- The VM6404H / VM6809H also includes a drop-down menu which allows for manual selection of fan speed.

Note: If the fans have stopped working, they will appear as follows.

Device Info
- This section lists the device’s type, Model Name, Firmware Version and port statuses.
Other

- Use the **Language** drop-down menu to select a preferred user interface language.

  - Options include: English, French, German, Italian, Japanese, Korean, Portuguese, Russian, Spanish, Simplified Chinese and Traditional Chinese.
User Account

The User Account page lets you add, edit, or delete users and change the password for accessing the VM6404H / VM6809H’s GUI.

Note: This is an Administrator only function.

- **Add account**– Click the Add account button to add another user to the list. The VM6404H / VM6809H supports up to 32 users and allows up to 16 concurrent logins (see page 70 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, set the password, add a description, and set the user’s permission level (see page 70 for more details).

- Delete – Click the Delete icon to remove a user and all user information attached to the account. The Administrator account can not be deleted.

- The default username and password are: administrator/password.
Add Account
Use the Add Account / Edit User window to name a user, set the user’s password, add a description, and set the user’s permission level (see Permission Level, page 71) for accessing the VM6404H / VM6809H’s GUI.

- Fill in a username or edit an existing one.
- Enter a password and re-type the password to confirm.

**Note:** Usernames and passwords accept multi-lingual characters, and must be 5–16 alphanumeric characters (excluding ;=\[\]_+=/\|"). Passwords are case sensitive. Usernames only support lower case letters.

- Add or edit the description for the user.
- Select the permission level that you want to grant the user (see Permission Level, page 71).
- Click **Create User** to save the data.
- Click **Cancel** to discard the changes and exit.
- If a user is logged into the VM6404H / VM6809H’s GUI, their user settings cannot be edited, and the fields in this screen are grayed out.
Permission Level
At the bottom of the New/Edit User page is the permission section, which is used to set a user’s permission level.

The three available permission levels are as follows:

- **Administrator** – this level provides full access and control of the VM6404H / VM6809H, in addition to full User Management privileges.
- **Advanced User** – this level provides full access and control with no User Management privileges.
- **Basic User** – this level only provides basic functions (connections and open profiles).
Port Name

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

- To name an Input/Output port, enter a descriptive name of up to 16 multi-language characters (excluding :;=\[]+=/?\|) in the corresponding field and click Save.
- Language characters available include: English, French, German, Italian, Japanese, Korean, Portuguese, Russian, Spanish, Simplified Chinese and Traditional Chinese.
- To change an Input/Output port’s name, enter another value and click Save.
- Input and Output port names can be the same.
- Press Cancel to go back a level, return to the initial screen, or exit.
Network

The Network page lets you configure the IP settings, website timeout, and Telnet settings for connecting to the VM6404H / VM6809H.

Enable DHCP to allow the DHCP server to assign an IP address to the VM6404H / VM6809H. Select Disable to enter your own static IP address settings for the device.

Click Cancel to use the following default values:

- IP Address – 192.168.0.60
- Subnet Mask – 255.255.255.0
- Default Gateway – 192.168.0.1
- Website Timeout* – 5 minutes
- Telnet Enabled

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.

* This option controls how long an inactive web connection stays logged into the VM6404H / VM6809H. Use N/A to disable this option. Other options include 5, 10, 30 and 60 minutes. Any changes will take effect immediately.
The **EDID Settings** page lets users view and select an EDID Mode so that the VM6404H / VM6809H can use the best resolution for its display(s).

**Note:** The EDID Mode can also be selected via the Front Panel pushbuttons – see **EDID Mode**, page 27.

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 VM6404H / VM6809H uses the settings configured for that EDID mode.

Options are:

- **ATEN Default**: All ports' EDID are the same as the hardware default EDID.
- **Port 1 Mode**: All ports' EDID are the same as Port1's EDID.
- **Remix**: All ports' EDID use the best display resolution.
- **Customized**: See Customized Mode, see page 78.
Customized Mode
The Customized Mode features an EDID Wizard that allows user-defined EDID configurations for optimum output.

- In the left-most panel of the page, select Customized from the EDID Mode section and click Apply.
- Port EDID Status: Select which input source port you want to store the EDID configuration.
- Retrieve EDID: Click and a pop-up window appears to retrieve the EDID settings of a stored EDID configuration: Customized EDID (01-04 / 01-09), ATEN Default, or Display port (the EDID of the display connected to the output port).

- The right panel displays a summary of the acquired EDID settings that you can edit. Click Save and select the configuration for the Current or All Ports for the duration of the session.
EDID & CEA Description
The right panel of the screen lets users view the configuration of the EDID and CEA Modes selected:

- From the left 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 highlight the menu items on the left column, the right column displays the current settings for the corresponding EDID configuration. Some of the screens are read-only.
- See *Customized EDID Parameters*, page 78 for more information on these two columns.
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 to deselect 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, refresh rate, and aspect ratio that work with the attached monitor/display device.
  - You may also choose from supported YCBCR 4:2:0 alternative
- Click **Clear** 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.

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.
Maintenance
The Maintenance page lets users upgrade the VM6404H / VM6809H’s firmware and back up or restore system settings. This is an Administrator only function.

To upgrade the VM6404H / VM6809H’s firmware, do the following:

1. Use the Browse button to locate the firmware upgrade file. Make sure you have the correct file saved on your PC.
2. Click Upgrade to begin the upgrade procedure.

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

To back up the VM6404H / VM6809H’s system settings, do the following:

1. Click Backup. A configuration file will then begin downloading.

To restore the VM6404H / VM6809H’s system settings, do the following:

1. Use the Browse button to locate the configuration file. Make sure you have the correct file saved on your PC.
2. Click Restore to begin the restoration procedure.

Note: User accounts cannot be backed up or restored.
**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 Switch™ functionality between different devices. This is an Administrator and Advanced User only function.

**Input**

Here users can select whether port capability is HDCP 2.2, 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 Seamless Switch™ is possible even when switching between HDCP and non-HDCP enabled devices.

**HDCP Check**

The HDCP Check button (upper-right corner) allows you to check the HDCP capability of the connected displays at one time (for VM6809H). The analyses are indicated in the brackets after the Fix HDCP check box for each port.
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.
- Click **Save** to save the settings or **Cancel** to exit without saving the settings.

Video

The Video page is used to configure HDMI Video options. Refer to page 63 for detailed settings.
Telnet Operation

The VM6404H / VM6809H can be operated and configured via a remote terminal session using Telnet.

To log into the VM6404H / VM6809H by means of a Telnet session, do the following:

1. On your computer, open a terminal (command line) session.
2. At the prompt, key in the VM6404H / VM6809H’s IP address in the following way:
   
   \texttt{telnet [IP address]:23}

3. Press \texttt{Enter}. The login screen appears. At the login prompt, provide your Username and Password.

\textbf{Note:} If a user logs on using a Username that is already in session, the newest login takes effect and the previous session is replaced.

Configuration Menu

Once a Telnet connection to the VM6404H / VM6809H 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:
   
   \texttt{IP} – Set IP address
   
   \texttt{LO} – Load connections from profile \textit{nn}
   
   \texttt{PW} – Change password
   
   \texttt{RI}– Read what input is connected to \textit{nn} input
   
   \texttt{RO} – Read what output is connected to \textit{nn} output
   
   \texttt{SB} – Set the serial port baud rate
   
   \texttt{SS} – Switch input to specified port
   
   \texttt{SV} – Save the current connections into profile \textit{nn}
   
   \texttt{TI} – Set timeout
   
   \texttt{VR} – Software version information
   
   Ctrl-Q – Quit
2. IP – Set network settings

- Set IP Address
  
  IP
  Old IP Address: 192.168.0.60  
  Old IP Subnet Mask: 255.255.255.0  
  Old Gateway Address: 192.168.0.1  
  New IP Address:

- Set Subnet Mask
  
  IP
  Old IP Address: 192.168.0.60  
  Old IP Subnet Mask: 255.255.255.0  
  Old Gateway Address: 192.168.0.1  
  New IP Address: 10.3.52.220  
  New IP Subnet Mask:

- Set Gateway Address
  
  IP
  Old IP Address: 192.168.0.60  
  Old IP Subnet Mask: 255.255.255.0  
  Old Gateway Address: 192.168.0.1  
  New IP Address: 10.3.52.220  
  New IP Subnet Mask: 255.255.254.0  
  New Gateway Address:

**Note:** After the New IP Address, Subnet Mask, and Gateway Address are entered, the Video Matrix Switch will automatically reboot to apply the new network settings.
3. LO – Load connections from profile
   LO 01
   Load profile 01 OK.

4. PW – Change password
   PW
   Old password: *******
   New password:

5. RI – Read what input is connected to nn output
   RI 01
   Input port 02 04 is connected to output port 01

6. RO – Read what output is connected to nn input
   RO 01
   Output port 02 is connected to input port 01

7. SB – Set serial port baud rate
   SB 96
   Serial port baud rate is set to 9600

8. SS – Switch input to specified output
   SS 01,03
   Switch input 01 to output 03

9. SV – Save the current connections into a profile
   SV 01
   Save the current connections into profile 01

10. TI – Set timeout
    TI 30
    Set 30 minute timeout
11. VR – Software version information

VR

Software version 1.0.

Note: All RS-232 commands in this manual are also applicable in Telnet mode, see RS-232 Commands, page 95.

Note: For further information about these functions, please reference the equivalent Browser GUI functions earlier in this chapter.
Chapter 5
Mobile Control

Overview

The VM6404H / VM6809H supports Video Matrix Control App, a free mobile app that allows you to switch profiles, audio inputs and video inputs, and also reminds you when any new firmware is available, all through a local area network to which the target VM6404H / VM6809H is connected. This mobile application is especially useful for profile and AV source switching when you do not have access to the VM6404H / VM6809H’s front panel or the web interface.
The Video Matrix Control App

Requirements

- Make sure your mobile device uses a supported version of the mobile operating system listed below before installing the app.

<table>
<thead>
<tr>
<th>Mobile Operating System</th>
<th>Supported Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>iOS</td>
<td>12.0 or later</td>
</tr>
<tr>
<td>Android</td>
<td>8.0 or later</td>
</tr>
</tbody>
</table>

- The VM6404H / VM6809H needs to be connected to a local area network via the Ethernet port.

Installation and Connections

To install the Video Matrix Control App on a mobile device, do the following:

1. From the mobile device, tap the App Store™ or Google Play™ icon.
2. In the search box, type “Video Matrix Control App”.
3. Tap Video Matrix Control App and then download and install the app.
4. Tap the app icon.
5. Follow the on-screen instructions to connect to the target VM6404H / VM6809H device by scanning the network, selecting from connection history, or specifying the device IP address and password.

Note:

- The Video Matrix Control App is designed to control one VM6404H / VM6809H device at a time.
- If you cannot find the VM6404H / VM6809H device, make sure that the VM6404H / VM6809H is connected to LAN and that the app is connected to the same LAN and then try again.
The Control Interface

The functions in the Video Matrix Control App are categorized into four tabs — **Profile**, **Control**, **Audio**, and **Settings**. See the table below for an overview of each tab.

<table>
<thead>
<tr>
<th>Control Interface</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Profile</strong> tab</td>
<td>In the <strong>Profile</strong> tab, you can switch profiles for display or change the video input for the profile that is playing.</td>
</tr>
<tr>
<td><strong>Control</strong> tab</td>
<td>In the <strong>Control</strong> tab, you can instantly switch video inputs for each of the output.</td>
</tr>
</tbody>
</table>

**Note:**
- The Video Matrix Control App can not be used to create profiles. Before using the app, make sure to create the profiles you need via the web interface. For details, see *Adding/Playing a Profile*, page 43.
- Any configuration change made to a profile via Video Matrix Control App is only effective while the profile is being played and will not be saved to the VM6404H / VM6809H unit.
- Previews of input assignment, as indicated by input numbers in the control interface on the left, are not supported for VM0404HB, VM0808HA, and VM0808HB.
In the **Audio** tab, you can specify the audio input for the digital and analog outputs of the VM6404H / VM6809H.

**Note:** The fields available in this tab may vary for the connected device.

<table>
<thead>
<tr>
<th>Control Interface</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Audio Control" /></td>
<td>In the <strong>Audio</strong> tab, you can specify the audio input for the digital and analog outputs of the VM6404H / VM6809H.</td>
</tr>
</tbody>
</table>

In the **Settings** tab, you can look up notification for system firmware upgrades, the current app version, and technical support contact, or log out of the app.

<table>
<thead>
<tr>
<th>Settings</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Settings" /></td>
<td>In the <strong>Settings</strong> tab, you can look up notification for system firmware upgrades, the current app version, and technical support contact, or log out of the app.</td>
</tr>
</tbody>
</table>
Chapter 6
RS-232 Commands

Serial Control Protocol Commands

The VM6404H / VM6809H’s built-in bi-directional RS-232 serial interface allows system control through a high-end controller or PC.

RS232 Pin Assignment

<table>
<thead>
<tr>
<th>Pin</th>
<th>Description</th>
<th>Pin</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Not connected</td>
<td>6</td>
<td>Not connected</td>
</tr>
<tr>
<td>2</td>
<td>TXD</td>
<td>7</td>
<td>Not connected</td>
</tr>
<tr>
<td>3</td>
<td>RXD</td>
<td>8</td>
<td>Not connected</td>
</tr>
<tr>
<td>4</td>
<td>Not connected</td>
<td>9</td>
<td>Not connected</td>
</tr>
<tr>
<td>5</td>
<td>GND</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Configuring the Serial Port

The controller’s serial port should be configured as follows:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Baud Rate</td>
<td>19200</td>
</tr>
<tr>
<td>Data Bits</td>
<td>8</td>
</tr>
<tr>
<td>Parity</td>
<td>None</td>
</tr>
<tr>
<td>Stop Bits</td>
<td>1</td>
</tr>
<tr>
<td>Flow Control</td>
<td>None</td>
</tr>
</tbody>
</table>
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.
**Switch Port Command**

The Switch Port command allows you to switch ports on the VM6404H / VM6809H.

The formula for the Switch command is as follows.

**VM6404H:**

\[
\text{Command} + \text{Input} + \text{Number} + \text{Output} + \text{Number} + \text{Control} + \text{[Enter]}
\]

**VM6809H:**

\[
\text{Command} + \text{Input} + \text{Number} + \text{Output} + \text{Number} + \text{Group} + \text{Control} + \text{[Enter]}
\]

1. For example, to switch input port 02 to output port 04, type:
   \[
   \text{sw i02 o04 [Enter]}
   \]

2. To switch output port 04 to the next port, type:
   \[
   \text{sw o04 [Enter]}
   \]

3. To turn off video output on port 03, type:
   \[
   \text{sw o03 off [Enter]}
   \]

4. To switch audio from input port 06 to stereo audio output, type:
   \[
   \text{sw i06 console audio [Enter]}
   \]

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

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>sw</td>
<td>Switch command</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Input Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>i</td>
<td>Input command</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Port number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>xx</td>
<td>01<del>04 or 01</del>08 port</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Output Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>o</td>
<td>Output command</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Port number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>yy</td>
<td>01<del>04 or 01</del>09 port</td>
</tr>
<tr>
<td>*</td>
<td>All output ports</td>
</tr>
</tbody>
</table>
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 04 (i.e., 001 i01, 002 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:

<table>
<thead>
<tr>
<th>Command</th>
<th>Input Command</th>
<th>Input Port</th>
<th>Output Command</th>
<th>Output Port</th>
<th>Group</th>
<th>Control</th>
<th>Enter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>sw</td>
<td>i</td>
<td>xx</td>
<td>o</td>
<td>yy</td>
<td>normal</td>
<td>on</td>
<td>[Enter]</td>
<td>Switch Port <strong>xx</strong> to <strong>yy</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>console audio</td>
<td></td>
<td></td>
<td>(xx:01<del>04 or 01</del>08; yy:01<del>04 or 01</del>09, *)</td>
</tr>
<tr>
<td>sw</td>
<td></td>
<td></td>
<td>o</td>
<td>yy</td>
<td></td>
<td>on</td>
<td>[Enter]</td>
<td>Turn on Port <strong>yy</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Turn off Port <strong>yy</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(yy:01<del>04 or 01</del>09, *)</td>
</tr>
<tr>
<td>sw</td>
<td></td>
<td></td>
<td>o</td>
<td>yy</td>
<td></td>
<td>+</td>
<td>[Enter]</td>
<td>Switch Port <strong>yy</strong> to next Port</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Switch Port <strong>yy</strong> to previous Port.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(yy:01<del>04 or 01</del>09, *)</td>
</tr>
</tbody>
</table>
Chapter 6. RS-232 Commands

**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:

\[
\text{Command} + \text{Control} + \text{[Enter]}
\]

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

\[
\text{edid port1 [enter]}
\]

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

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>edid</td>
<td>EDID Mode command</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Control</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>port1</td>
<td>Implement the EDID of the connected display to Port 1, and pass it to the video source.</td>
</tr>
<tr>
<td>remix</td>
<td>Implement the EDID of each connected display according to its connection when the VM6404H / VM6809H is first powered on, or immediately after selecting the Remix option.</td>
</tr>
<tr>
<td>default</td>
<td>Implements ATEN’s default EDID. (default)</td>
</tr>
<tr>
<td>custom</td>
<td>Implements the customized mode as set in the EDID system settings. (See Customized EDID Parameters, page 78)</td>
</tr>
</tbody>
</table>

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

The following table lists the available EDID commands:

<table>
<thead>
<tr>
<th>Command</th>
<th>Control</th>
<th>Enter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>edid</td>
<td>port1</td>
<td>[Enter]</td>
<td>The EDID from Port 1 is passed to the video source.</td>
</tr>
<tr>
<td>edid</td>
<td>remix</td>
<td>[Enter]</td>
<td>The VM6404H / VM6809H implements the EDID of each connected display according to its connection when the VM6404H / VM6809H is first powered on, or immediately after selecting the Remix option.</td>
</tr>
<tr>
<td>edid</td>
<td>default</td>
<td>[Enter]</td>
<td>ATEN’s default EDID is passed to the video source.</td>
</tr>
<tr>
<td>edit</td>
<td>custom</td>
<td>[Enter]</td>
<td>Implements the customized mode.</td>
</tr>
</tbody>
</table>
**Mute Command**

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

The formula for the Mute command is as follows:

VM6404H:

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

VM6809H:

```
Command + Output + Number + Group + 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:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>mute</td>
<td>Mute command</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Output Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>o</td>
<td>Output command</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Port number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>yy</td>
<td>01<del>04 or 01</del>09 port (default is 01)</td>
</tr>
<tr>
<td>*</td>
<td>All output ports</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Group</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>normal</td>
<td>Mute the default HDMI audio outputs.</td>
</tr>
<tr>
<td>console</td>
<td>Mute the stereo audio output of VM6809H.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Control</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>on</td>
<td>Mute on; audio from HDMI output port is disabled</td>
</tr>
<tr>
<td>off</td>
<td>Mute off; audio output enabled (default)</td>
</tr>
</tbody>
</table>

**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:

<table>
<thead>
<tr>
<th>Command</th>
<th>Output Command</th>
<th>Port Number</th>
<th>Group</th>
<th>Control</th>
<th>Enter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>mute</td>
<td>o</td>
<td>yy *</td>
<td>normal</td>
<td>on</td>
<td>[Enter]</td>
<td>Audio on for output port yy (yy:01<del>04 or 01</del>09, *)</td>
</tr>
<tr>
<td>mute</td>
<td>o</td>
<td>yy *</td>
<td>normal</td>
<td>off</td>
<td>[Enter]</td>
<td>Audio off for output port yy (default) (yy:01<del>04 or 01</del>09, *)</td>
</tr>
</tbody>
</table>
**CEC Command**

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

The formula for the CEC command is as follows:

\[
\text{Command} + \text{Output} + \text{Number} + \text{Control} + [\text{Enter}]
\]

1. For example, to enable the CEC function on output port 1, type:

   \texttt{cec o01 on [enter]}

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

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>cec</td>
<td>CEC command</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Output Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>o</td>
<td>Output command</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Port number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>yy</td>
<td>01<del>04 or 01</del>09 port (default is 01)</td>
</tr>
<tr>
<td>*</td>
<td>All output ports</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Control</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>off</td>
<td>Disable CEC (default)</td>
</tr>
<tr>
<td>on</td>
<td>Enable CEC</td>
</tr>
</tbody>
</table>

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

The following table lists the available CEC commands:

<table>
<thead>
<tr>
<th>Command</th>
<th>Output Port</th>
<th>Control</th>
<th>Enter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>cec</td>
<td>yy *</td>
<td>off</td>
<td>[Enter]</td>
<td>CEC off for output port yy (default) (yy:01<del>04 or 01</del>09, *)</td>
</tr>
<tr>
<td>cec</td>
<td>yy *</td>
<td>on</td>
<td>[Enter]</td>
<td>CEC on for output port yy (yy:01<del>04 or 01</del>09, *)</td>
</tr>
</tbody>
</table>
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:

\[
\text{Command} + \text{Output} + \text{Number 1} + \text{Horizontal Resolution} + \text{Number 2} + \text{Vertical Resolution} + \text{Number 3} + \text{Frequency} + \text{Number 4} + \text{Control} + \text{[Enter]}
\]

1. For example, to turn scaling off for output port 02, type:
   \[\text{scaling o02 off [Enter]}\]

2. To set the scaling for output port 04 to 1920x1080@60Hz, type:
   \[\text{scaling o04 1080p [Enter]}\]

3. To set the scaling for all output ports to the connected display’s native resolution, type:
   \[\text{scaling o* native [Enter]}\]

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

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>scaling</td>
<td>Scaling command</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Output</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>o</td>
<td>Output command</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Port Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>yy</td>
<td>01<del>04 or 01</del>09 port</td>
</tr>
<tr>
<td>*</td>
<td>All output ports</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Horizontal Resolution</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>hor</td>
<td>Horizontal resolution command for scaling</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Resolution Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>hhhh</td>
<td>Horizontal resolution</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vertical Resolution</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ver</td>
<td>Vertical resolution command for scaling</td>
</tr>
</tbody>
</table>
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:

<table>
<thead>
<tr>
<th>Command</th>
<th>Output</th>
<th>Port Number</th>
<th>Horizontal Resolution</th>
<th>Vertical Resolution</th>
<th>Number</th>
<th>Frequency</th>
<th>Number</th>
<th>Control</th>
<th>Enter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>scaling</td>
<td>o</td>
<td>yy *</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>off</td>
<td>[Enter]</td>
<td>Turn off scaling for port yy (by pass mode) yy:01<del>04, 01</del>09, or *</td>
</tr>
<tr>
<td>scaling</td>
<td>o</td>
<td>yy *</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>native</td>
<td>[Enter]</td>
<td>Enable display's native resolution for scaling on output port yy (default) yy:01<del>04, 01</del>09, or *</td>
</tr>
<tr>
<td>Command</td>
<td>Output</td>
<td>Port Number</td>
<td>Horizontal Resolution</td>
<td>Vertical Resolution</td>
<td>Number</td>
<td>Frequency</td>
<td>Number</td>
<td>Control</td>
<td>Enter</td>
<td>Description</td>
</tr>
<tr>
<td>---------</td>
<td>--------</td>
<td>-------------</td>
<td>-----------------------</td>
<td>--------------------</td>
<td>--------</td>
<td>-----------</td>
<td>--------</td>
<td>---------</td>
<td>------</td>
<td>-------------</td>
</tr>
<tr>
<td>scaling</td>
<td>o</td>
<td>yy</td>
<td>hor</td>
<td>1920</td>
<td>ver</td>
<td>1080</td>
<td>freq</td>
<td>60</td>
<td>[Enter]</td>
<td>Scale output port yy to 1920x1080@60Hz yy:01<del>04, 01</del>09, or *</td>
</tr>
<tr>
<td>scaling</td>
<td>o</td>
<td>yy</td>
<td>hor</td>
<td>1280</td>
<td>ver</td>
<td>720</td>
<td>freq</td>
<td>60</td>
<td>[Enter]</td>
<td>Scale output port yy to 1280x720@60Hz yy:01<del>04, 01</del>09, or *</td>
</tr>
<tr>
<td>scaling</td>
<td>o</td>
<td>yy</td>
<td>hor</td>
<td>1920</td>
<td>ver</td>
<td>1200</td>
<td>freq</td>
<td>60</td>
<td>[Enter]</td>
<td>Scale output port yy to 1920x1200@60Hz yy:01<del>04, 01</del>09, or *</td>
</tr>
<tr>
<td>scaling</td>
<td>o</td>
<td>yy</td>
<td>hor</td>
<td>1600</td>
<td>ver</td>
<td>1200</td>
<td>freq</td>
<td>60</td>
<td>[Enter]</td>
<td>Scale output port yy to 1600x1200@60Hz yy:01<del>04, 01</del>09, or *</td>
</tr>
<tr>
<td>scaling</td>
<td>o</td>
<td>yy</td>
<td>hor</td>
<td>1400</td>
<td>ver</td>
<td>1050</td>
<td>freq</td>
<td>60</td>
<td>[Enter]</td>
<td>Scale output port yy to 1400x1050@60Hz yy:01<del>04, 01</del>09, or *</td>
</tr>
<tr>
<td>scaling</td>
<td>o</td>
<td>yy</td>
<td>hor</td>
<td>1280</td>
<td>ver</td>
<td>1024</td>
<td>freq</td>
<td>60</td>
<td>[Enter]</td>
<td>Scale output port yy to 1280x1024@60Hz yy:01<del>04, 01</del>09, or *</td>
</tr>
<tr>
<td>scaling</td>
<td>o</td>
<td>yy</td>
<td>hor</td>
<td>1024</td>
<td>ver</td>
<td>768</td>
<td>freq</td>
<td>60</td>
<td>[Enter]</td>
<td>Scale output port yy to 1024x768@60Hz yy:01<del>04, 01</del>09, or *</td>
</tr>
<tr>
<td>Command</td>
<td>Output</td>
<td>Port Number</td>
<td>Horizontal Resolution</td>
<td>Vertical Resolution</td>
<td>Frequency</td>
<td>Number</td>
<td>Control</td>
<td>Enter</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>---------</td>
<td>--------</td>
<td>-------------</td>
<td>-----------------------</td>
<td>--------------------</td>
<td>-----------</td>
<td>--------</td>
<td>---------</td>
<td>-------</td>
<td>-------------</td>
<td></td>
</tr>
<tr>
<td>scaling</td>
<td>o</td>
<td>yy *</td>
<td>hor 1280 ver 800</td>
<td>freq 60</td>
<td></td>
<td></td>
<td></td>
<td>[Enter]</td>
<td>Scale output port yy to 1280x800@60Hz yy:01<del>04, 01</del>09, or *</td>
<td></td>
</tr>
<tr>
<td>scaling</td>
<td>o</td>
<td>yy *</td>
<td>hor 720 ver 576</td>
<td>freq 50</td>
<td></td>
<td></td>
<td></td>
<td>[Enter]</td>
<td>Scale output port yy to 720x576@50Hz yy:01<del>04, 01</del>09, or *</td>
<td></td>
</tr>
<tr>
<td>scaling</td>
<td>o</td>
<td>yy *</td>
<td>hor 1600 ver 900</td>
<td>freq 60</td>
<td></td>
<td></td>
<td></td>
<td>[Enter]</td>
<td>Scale output port yy to 1600x900@60Hz yy:01<del>04, 01</del>09, or *</td>
<td></td>
</tr>
</tbody>
</table>
FrameSync Command
The FrameSync command allows you to enable or disable the Frame Synchronization function for VM6809H.

The formula for the Scaling command is as follows:

**Command + Control + [Enter]**

For example, to enable the Frame Synchronization function, type:

*frsync on [Enter]*

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

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>frsync</td>
<td>Frame Synchronization command</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Control</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>off</td>
<td>Turn off the FrameSync</td>
</tr>
<tr>
<td>on</td>
<td>Turn on the FrameSync</td>
</tr>
</tbody>
</table>

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

The following table lists the available FrameSync commands:

<table>
<thead>
<tr>
<th>Command</th>
<th>Control</th>
<th>Enter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>frsync</td>
<td>off</td>
<td>[Enter]</td>
<td>Turn off the Frame Synchronization function</td>
</tr>
<tr>
<td>frsync</td>
<td>on</td>
<td>[Enter]</td>
<td>Turn on the Frame Synchronization function</td>
</tr>
</tbody>
</table>
Fan Speed Command

The Fan Speed command allows you to set the internal fan speed that cools the VM6404H / VM6809H.

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:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>fan</td>
<td>Fan Speed Command</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Control</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>low</td>
<td>Set internal fan to low speed (default)</td>
</tr>
<tr>
<td>mid</td>
<td>Set internal fan to normal speed</td>
</tr>
<tr>
<td>high</td>
<td>Set internal fan to high speed</td>
</tr>
</tbody>
</table>

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

The following table lists the available Fan Speed commands:

<table>
<thead>
<tr>
<th>Command</th>
<th>Control</th>
<th>Enter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>fan</td>
<td>low</td>
<td>[Enter]</td>
<td>Sets fan speed to low</td>
</tr>
<tr>
<td>fan</td>
<td>mid</td>
<td>[Enter]</td>
<td>Sets fan speed to normal</td>
</tr>
<tr>
<td>fan</td>
<td>high</td>
<td>[Enter]</td>
<td>Sets fan speed to high</td>
</tr>
</tbody>
</table>
**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:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>echo</td>
<td>Echo command</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Control</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>on</td>
<td>Turns Echo function on</td>
</tr>
<tr>
<td>off</td>
<td>Turns Echo function off (default)</td>
</tr>
</tbody>
</table>

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

The following table lists the available Echo commands:

<table>
<thead>
<tr>
<th>Command</th>
<th>Control</th>
<th>Enter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>echo</td>
<td>on</td>
<td>[Enter]</td>
<td>Turn on Echo function</td>
</tr>
<tr>
<td>echo</td>
<td>off</td>
<td>[Enter]</td>
<td>Turn off Echo function</td>
</tr>
</tbody>
</table>
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:

\[
\text{Command + Control + [Enter]}
\]

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

\[\text{blackscreen on [Enter]}\]

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

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>blackscren</td>
<td>Black Screen command</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Control</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>on</td>
<td>Turns Black Screen function on (default)</td>
</tr>
<tr>
<td>off</td>
<td>Turns Black Screen function off</td>
</tr>
</tbody>
</table>

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

The following table lists the available Black Screen commands:

<table>
<thead>
<tr>
<th>Command</th>
<th>Control</th>
<th>Enter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>blackscren</td>
<td>on</td>
<td>[Enter]</td>
<td>Turn on Black Screen function</td>
</tr>
<tr>
<td>blackscren</td>
<td>off</td>
<td>[Enter]</td>
<td>Turn off Black Screen function</td>
</tr>
</tbody>
</table>
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:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>read</td>
<td>Read command</td>
</tr>
</tbody>
</table>

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

The following table lists the available Read commands:

<table>
<thead>
<tr>
<th>Command</th>
<th>Enter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>read</td>
<td>[Enter]</td>
<td>View information about the device</td>
</tr>
</tbody>
</table>

Reset Command

The Reset command allows you to reset the VM6404H / VM6809H 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:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>reset</td>
<td>Reset command</td>
</tr>
</tbody>
</table>

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

The following table lists the available Reset commands:

<table>
<thead>
<tr>
<th>Command</th>
<th>Enter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>reset</td>
<td>[Enter]</td>
<td>Resets the device settings</td>
</tr>
</tbody>
</table>
Baud Rate Command

The Baud Rate command allows you to set the RS-232 data rate for the VM6404H / VM6809H 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:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>baud</td>
<td>Sets the RS-232 baud rate</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Control</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9600</td>
<td>Use 9600 baud rate</td>
</tr>
<tr>
<td>19200</td>
<td>Use 19200 baud rate (default)</td>
</tr>
<tr>
<td>38400</td>
<td>Use 38400 baud rate</td>
</tr>
<tr>
<td>115200</td>
<td>Use 115200 baud rate</td>
</tr>
</tbody>
</table>

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

The following table lists the available Baud Rate commands:

<table>
<thead>
<tr>
<th>Command</th>
<th>Control</th>
<th>Enter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>baud</td>
<td>9600 / 19200 / 38400 / 115200</td>
<td>[Enter]</td>
<td>Sets the RS-232 baud rate</td>
</tr>
</tbody>
</table>
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:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>profile</td>
<td>Save / Load profile</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Profile</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>f</td>
<td>Profile command</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Profile Number</th>
<th>Description</th>
</tr>
</thead>
</table>
| yy            | VM6404H: 01~08 (default is 01)  
               | VM6809H: 01~17 (default is 01)  |

<table>
<thead>
<tr>
<th>Control</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>save</td>
<td>Save the connection configuration</td>
</tr>
<tr>
<td>load</td>
<td>Load a saved profile</td>
</tr>
</tbody>
</table>

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

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

<table>
<thead>
<tr>
<th>Command</th>
<th>Profile</th>
<th>Profile Number</th>
<th>Control</th>
<th>Enter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>profile</td>
<td>f</td>
<td>yy *</td>
<td>save</td>
<td>[Enter]</td>
<td>Save the connections as profile yy. (yy:01<del>08 or 01</del>17, *)</td>
</tr>
<tr>
<td>profile</td>
<td>f</td>
<td>yy *</td>
<td>load</td>
<td>[Enter]</td>
<td>Load profile yy. (yy:01<del>08 or 01</del>17, *)</td>
</tr>
</tbody>
</table>
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 04, type:
   `osd o04 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:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>osd</td>
<td>OSD command</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Output</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>o</td>
<td>Output port command</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>yy</td>
<td>Output port VM6404H: 01<del>04 (default is 01) VM6809H: 01</del>09 (default is 01)</td>
</tr>
<tr>
<td>*</td>
<td>All output ports</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Control</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>on</td>
<td>Enable OSD function</td>
</tr>
<tr>
<td>off</td>
<td>Disable OSD function (default)</td>
</tr>
</tbody>
</table>

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

The following table lists the available OSD commands:

<table>
<thead>
<tr>
<th>Command</th>
<th>Output Command</th>
<th>Output Port</th>
<th>Control</th>
<th>Enter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>osd</td>
<td>o</td>
<td>yy</td>
<td>on</td>
<td>[Enter]</td>
<td>OSD on for output yy yy:01~04/09, *</td>
</tr>
<tr>
<td>osd</td>
<td>o</td>
<td>yy</td>
<td>off</td>
<td>[Enter]</td>
<td>OSD off for output yy (default) yy:01~04/09, *</td>
</tr>
</tbody>
</table>
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:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>alert</td>
<td>Alert command</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Input</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>i</td>
<td>Input command</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Port number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>yy</td>
<td>01<del>04 or 01</del>08 port</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Control</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>off</td>
<td>Disable Alert (default)</td>
</tr>
<tr>
<td>m1</td>
<td>Show basic Alert (flashing border)</td>
</tr>
<tr>
<td>m2</td>
<td>Show detailed Alert (flashing border and port information)</td>
</tr>
</tbody>
</table>

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

The following table lists the available Alert commands:

<table>
<thead>
<tr>
<th>Command</th>
<th>Input Command</th>
<th>Input Port</th>
<th>Control</th>
<th>Enter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>alert</td>
<td>i</td>
<td>yy</td>
<td>off</td>
<td>[Enter]</td>
<td>Alert off for input port yy (yy:01<del>04 or 01</del>08)</td>
</tr>
<tr>
<td>alert</td>
<td>i</td>
<td>yy</td>
<td>m1</td>
<td>[Enter]</td>
<td>Basic Alert on for input port yy (yy:01<del>04 or 01</del>08)</td>
</tr>
<tr>
<td>alert</td>
<td>i</td>
<td>yy</td>
<td>m2</td>
<td>[Enter]</td>
<td>Detailed Alert on for input port yy (yy:01<del>04 or 01</del>08)</td>
</tr>
</tbody>
</table>
Fan Speed Command

To setup fan speed, use the following command:

Command + Speed Value + [Enter]

For example, to set the fans to operate at high speed, type:

fan high [Enter]

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

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>fan</td>
<td>Fan Speed command</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Speed Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>low</td>
<td>Low speed</td>
</tr>
<tr>
<td>mid</td>
<td>Standard speed</td>
</tr>
<tr>
<td>high</td>
<td>High speed</td>
</tr>
<tr>
<td>auto</td>
<td>Automatically detect the temperature and activate a proper speed</td>
</tr>
</tbody>
</table>

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

The following table lists the available Fan Speed commands:

<table>
<thead>
<tr>
<th>Command</th>
<th>Speed Value</th>
<th>Enter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>low</td>
<td>low</td>
<td>[Enter]</td>
<td>Set the fan speed to low</td>
</tr>
<tr>
<td>mid</td>
<td>mid</td>
<td>[Enter]</td>
<td>Set the fan speed to standard</td>
</tr>
<tr>
<td>high</td>
<td>high</td>
<td>[Enter]</td>
<td>Set the fan speed to high speed</td>
</tr>
<tr>
<td>auto</td>
<td>auto</td>
<td>[Enter]</td>
<td>Set the fan speed to auto</td>
</tr>
</tbody>
</table>
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 iii:

North America

<table>
<thead>
<tr>
<th>Email Support</th>
<th><a href="mailto:support@aten-usa.com">support@aten-usa.com</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>Online Technical Support</td>
<td>Troubleshooting Documentation Software Updates</td>
</tr>
<tr>
<td></td>
<td><a href="http://www.aten-usa.com/support">http://www.aten-usa.com/support</a></td>
</tr>
<tr>
<td>Telephone Support</td>
<td>1-488-999-ATEN ext 4988</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Function</th>
<th>VM6404H</th>
<th>VM6809H</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Video Input</strong></td>
<td>4 x HDMI Type A Female (Black)</td>
<td>8 x HDMI Type A Female (Black)</td>
</tr>
<tr>
<td>Impedance</td>
<td>100 Ω</td>
<td></td>
</tr>
<tr>
<td>Max. Distance</td>
<td>1.8 m</td>
<td></td>
</tr>
<tr>
<td><strong>Video Output</strong></td>
<td>4 x HDMI Type A Female (Black)</td>
<td>9 x HDMI Type A Female (Black)</td>
</tr>
<tr>
<td>Impedance</td>
<td>100 Ω</td>
<td></td>
</tr>
<tr>
<td>Max. Distance</td>
<td>15 m</td>
<td></td>
</tr>
<tr>
<td><strong>Video</strong></td>
<td>Max. Data Rate</td>
<td>10.2 Gbps (3.40 Gbps per Lane)</td>
</tr>
<tr>
<td>Max. Pixel Clock</td>
<td>340 MHz</td>
<td></td>
</tr>
<tr>
<td>Compliance</td>
<td>HDMI (3D, Deep Color, 4K)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>HDCP 2.2 Compatible</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Consumer Electronics Control (CEC)</td>
<td></td>
</tr>
<tr>
<td>Max. Resolution</td>
<td>Up to 4096 x 2160 / 3840 x 2160 @ 60Hz (4:2:0); 4096 x 2160 / 3840 x 2160 @ 30Hz (4:4:4)</td>
<td>Up to 15 m</td>
</tr>
<tr>
<td><strong>Audio</strong></td>
<td>Output</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>1 x Mini Stereo Jack Female (Green)</td>
<td></td>
</tr>
<tr>
<td><strong>Control</strong></td>
<td>RS-232</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Connector: 1 x DB-9 Female (Black)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Baud rate and protocol:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Baud Rate: 19200, Data Bits: 8, Stop Bits: 1, Parity: No, Flow Control: No</td>
<td></td>
</tr>
<tr>
<td>IR</td>
<td>1 x Mini Stereo Jack Female (Black)</td>
<td>N/A</td>
</tr>
<tr>
<td>Ethernet</td>
<td>1 x RJ-45 Female</td>
<td></td>
</tr>
<tr>
<td><strong>EDID Settings</strong></td>
<td>EDID Mode: Default / Port 1 / Remix / Customized (EDID Wizard Support)</td>
<td></td>
</tr>
<tr>
<td><strong>Power</strong></td>
<td>Connector</td>
<td>1 x 3-Prong AC Socket</td>
</tr>
<tr>
<td>I/P Rating</td>
<td>100-240 VAC; 50-60Hz; 1.0A</td>
<td></td>
</tr>
<tr>
<td>Consumption</td>
<td>120VAC, 47.6W; 230VAC, 47.5W</td>
<td>110VAC, 79.5W; 220VAC, 78.1W</td>
</tr>
<tr>
<td><strong>Environment</strong></td>
<td>Operating Temp.</td>
<td>0–50°C</td>
</tr>
<tr>
<td></td>
<td>Storage Temp.</td>
<td>-20–60°C</td>
</tr>
<tr>
<td></td>
<td>Humidity</td>
<td>0–80% RH, Non-condensing</td>
</tr>
<tr>
<td>Function</td>
<td>VM6404H</td>
<td>VM6809H</td>
</tr>
<tr>
<td>----------------</td>
<td>---------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Physical</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Properties</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Housing</td>
<td>Metal</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>4.72 kg</td>
<td>7.05 kg</td>
</tr>
<tr>
<td>Dimensions (L x W x H)</td>
<td>43.24 x 30.73 x 4.40 cm</td>
<td>43.24 x 45.03 x 4.40 cm</td>
</tr>
<tr>
<td>Carton Lot</td>
<td></td>
<td>1 pcs</td>
</tr>
</tbody>
</table>
Limited Warranty

ATEN warrants its hardware in the country of purchase against flaws in materials and workmanship for a Warranty Period of two [2] years (warranty period may vary in certain regions/countries) commencing on the date of original purchase. This warranty period includes the LCD panel of ATEN LCD KVM switches. Select products are warranted for an additional year (see *A+ Warranty* for further details). Cables and accessories are not covered by the Standard Warranty.

What is covered by the Limited Hardware Warranty

ATEN will provide a repair service, without charge, during the Warranty Period. If a product is detective, ATEN will, at its discretion, have the option to (1) repair said product with new or repaired components, or (2) replace the entire product with an identical product or with a similar product which fulfills the same function as the defective product. Replaced products assume the warranty of the original product for the remaining period or a period of 90 days, whichever is longer. When the products or components are replaced, the replacing articles shall become customer property and the replaced articles shall become the property of ATEN.

To learn more about our warranty policies, please visit our website: