# VM6809H

8 x 9 4K HDMI Matrix Switch with Scaler

4K is the next generation of image quality for high definition video, which delivers eight million pixels that is four times as much detail as 1080p Full HD resolutions. ATEN's VM6809H 4K HDMI Matrix Switch with Scaler is compatible with the two latest 4K video resolution standards: 3840 x 2160 and 4096 x 2160. The VM6809H offers powerful HD processing to produce 4K resolutions across nine displays with crystal-clear images.

The VM6809H supports 4K @ 60 Hz, HDMI* and HDCP 2.2 and features seamless switching that employs an FPGA matrix architecture that ensures continuous video streams, real-time control, and stable signal transmissions. With a built-in high-performance scaler, the VM6809H easily converts various input resolutions into various output display resolutions, giving viewers the best video and picture quality across all displays. The switch integrates video wall functionality with an easy-to-use web GUI that lets you create 17 connection profiles that can be customized into different video wall layouts.

The VM6809H is an ideal solution for applications that require multiple HDMI displays with multiple HDMI sources to be conveniently setup – such as for stage presentations, digital classroom, video conference rooms and any installation that requires real-time synchronization.

*Note:
HDMI supports 3840 x 2160 @ 30 Hz (4:4:4), 3840 x 2160 @ 60 Hz (4:2:0), 4096 x 2160 @ 30 Hz (4:4:4), 4096 x 2160 @ 60 Hz (4:2:0) resolutions.

## Features

- 8 x 9 HDMI input/output connections
- Multiple means for system configuration including front-panel pushbuttons, RS-232 control, and Ethernet connections for web GUI or Telnet
- View and control via ATEN Video Matrix Control App in a swift and agile way
- 4K Scaler – features a 4K video scaling function to convert input resolutions to the display's native resolutions
- Seamless Switch™ – features close-to-zero second switching for 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 resolutions across different screens
- 4K Video Wall using Lower-Resolution Displays – split a 4K signal to four 1080p displays or nine 720p displays to form a 2x2 or 3x3 4K video wall
- FrameSync – prevents image tearing by synchronizing the scaler output frame rate to the input signal frame rate
- HDMI (3D, Deep color, 4K); HDCP 2.2 compatible
- Consumer Electronics Control (CEC) supported*
- Audio-enabled, HDMI audio can be extracted to stereo audio
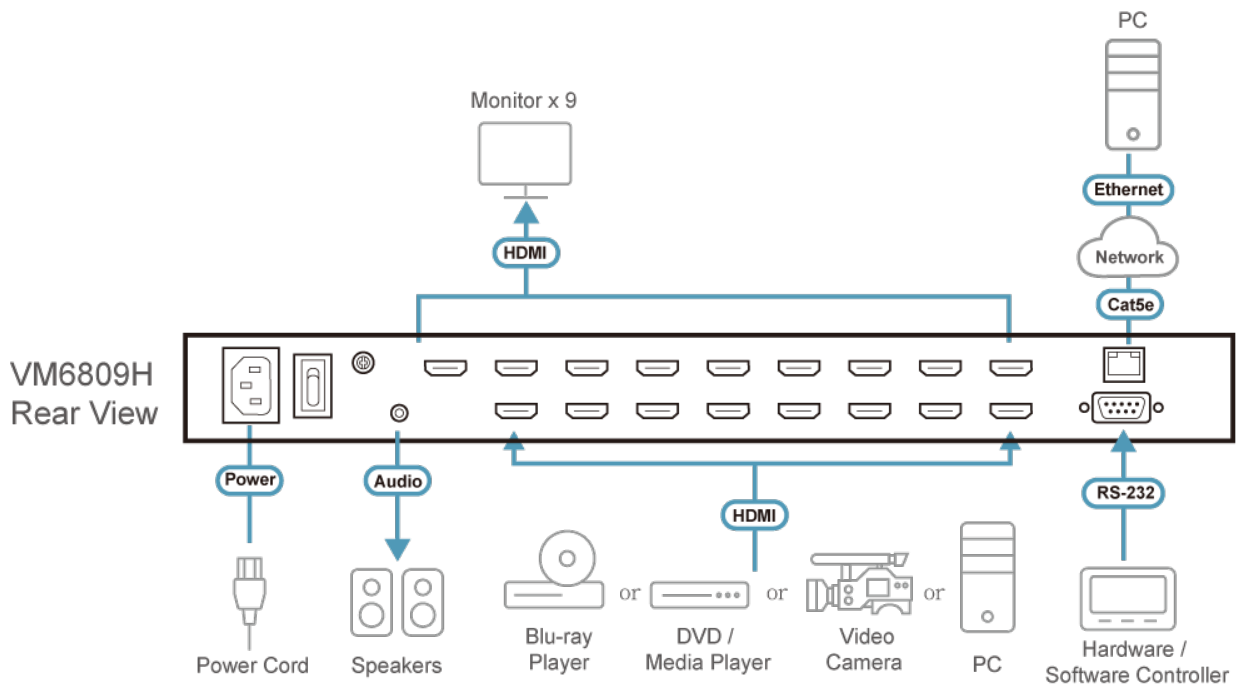- ESD protection for HDMI
- Rack-mountable (1U design)
  *Note:
  1. When Seamless Switch™ is enabled, 3D, Deep Color, or interlace (i.e., 1080i) formats will not be supported. To use these formats, make sure to disable Seamless Switch™.
  2. Videos may not display within range when Seamless Switch™ or Video Wall is enabled, in which case please adjust the display settings on your device.

## Specification

| Video Input | |
|---|---|
| Interfaces | 8 x HDMI Type A Female (Black) |
| Impedance | 100 Ω |
| Max. Distance | 3.0 m |
| Video Output | |

| Interfaces | 9 x HDMI Type A Female (Black) |
|---|---|
| Impedance | 100 Ω |
| Max. Distance | 15 m |
| Video | |
| Max. Data Rate | 10.2 Gbps (3.40 Gbps per lane) |
| Max. Pixel Clock | 340 MHz |
| Compliance | HDMI (3D, Deep Color, 4K);<br>HDCP 2.2 Compatible;<br>Consumer Electronics Control (CEC) |
| Max. Resolution | Up to 4096 x 2160 / 3840 x 2160 @ 60Hz (4:2:0);<br>4096 x 2160 / 3840 x 2160 @ 30Hz (4:4:4) |
| Max. Distance | Up to 15 m |
| Audio | |
| Output | 1 x Mini Stereo Jack Female (Green) |
| Control | |
| RS-232 | Connector: 1 x DB-9 Female (Black);<br>Baud Rate: 19200, Data Bits: 8, Stop Bits: 1, Parity: No,<br>Flow Control: No |
| Ethernet | 1 x RJ-45 Female |
| EDID Settings | EDID Mode: Default / Port 1 / Remix / Customized<br>(EDID Wizard Support) |
| Connectors | |
| Power | 1 x 3-prong AC Socket |
| Power | |
| Maximum Input Power Rating | 100-240 VAC;50-60Hz;1.0A |
| Power Consumption | AC110V:79.5W:373BTU/h<br>AC220V:78.1W:366BTU/h<br><br>Note:<br>● The measurement in Watts indicates the typical power consumption of the device with no external loading.<br>● The measurement in BTU/h indicates the power consumption of the device when it is fully loaded. |
| Environmental | |
| Operating Temperature | 0-50°C |
| Storage Temperature | -20 - 60°C |
| Humidity | 0 - 80% RH, Non-Condensing |
| Physical Properties | |
| Housing | Metal |
| Weight | 7.05 kg ( 15.53 lb ) |
| Dimensions (L x W x H) | 43.24 x 45.03 x 4.40 cm<br>(17.02 x 17.73 x 1.73 in.) |
| Note | For some of rack mount products, please note that the standard physical dimensions of WxDxH are expressed using a LxWxH format. |

**Diagram**



Note: Connects up to 9 display devices to the HDMI output ports, and up to 8 video source devices to the HDMI input ports.