8 x 9 4K HDMI Matrix Switch with Scaler

VM6809H

reddot award 2015
winner interface design

● 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 2.0* 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 2.0 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.

4K — HDMI™ HIGH DEFINITION MULTIMEDIA INTERFACE

| A/V In HDMI | A/V Out HDMI | RS-232 Control | Video Wall | EDID | FPGA Design | Scaler | Seamless Switch |

VM6809H Front view
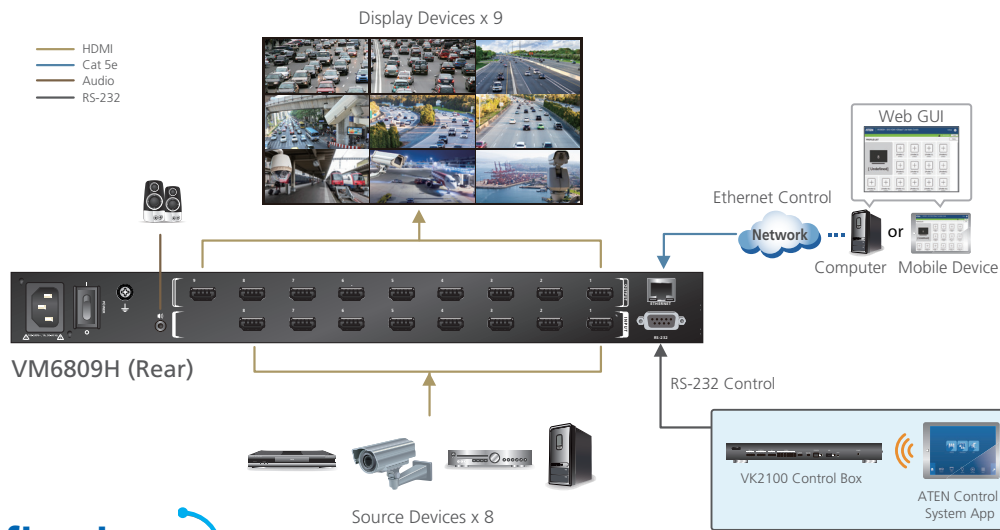

VM6809H Rear view

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
- 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.

Highlights

Video Wall	The VM6809H is built-in with video wall functionality that allows you to customize display layouts using the intuitive web GUI which has won the Red Dot Interface Design award. Through the profile setup that comes with up to 17 connection profiles, multiple displays can be easily configured to show video as a single large screen in various layouts – to see "what you want, how you want it".
4K Scaler	The VM6809H is equipped with a high-performance 4K scaling engine that converts various input resolutions into the display's native resolution, giving viewers the best picture and video quality. Inputs with low resolutions are scaled perfectly to the best fit, so that video playback is smooth and pleasant. In addition, the premium scaling engine offers a range of aspect settings that automatically adjusts the picture ratio for maximum viewing comfort.
Smooth and Seamless Viewing Experience	The VM6809H's built-in FPGA design unifies video formats and provides continuous video streams, real-time switching, and stable signal transmissions. It is capable of high-speed switching between all input and output ports – supporting TMDS high data transfer rates of up to 4K @ 60 Hz to minimize latency.

Display Devices x 9

HDMI
Cat 5e
Audio
RS-232

Web GUI

Ethernet Control

Network

Computer   Mobile Device

VM6809H (Rear)

RS-232 Control

VK2100 Control Box

ATEN Control System App

Source Devices x 8

Specifications

Function	VM6809H
Video Input	
Interface	8 x HDMI Type A Female (Black)
Impedance	100 Ω
Max. Distance	1.8 m
Video Output	
Interface	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); HDCP 2.2 Compatible; Consumer Electronics Control (CEC)
Max. Resolution	Up to 4096 x 2160 / 3840 x 2160 @ 60 Hz (4:2:0); 4096 x 2160 / 3840 x 2160 @ 30 Hz (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); **Baud Rate:** 19200, **Data Bits:** 8, **Stop Bits:** 1, **Parity:** No, **Flow Control:** No
Ethernet	1 x RJ-45 Female
EDID Settings	EDID Mode: Default / Port 1 / Remix / Customized (EDID Wizard Support)
Power	
Connectors	1 x 3-prong AC Socket
Maximum Input Power Rating	100 - 240 VAC; 50 - 60 Hz; 1.0 A
Consumption	AC 110V: 79.5W; AC 220V: 78.1W
Environmental	
Operating Temperature	0° to 50° C
Storage Temperature	-20° to 60° C
Humidity	0 - 80% RH, Non-Condensing
Physical Properties	
Housing	Metal
Weight	7.05 kg
Dimensions (L x W x H)	43.24 x 45.03 x 4.40 cm

Product information is subject to change without prior notice.