

## VM6809H

8 x 9 4K HDMI Matrix Switch with Scaler



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.



**HDMI**<sup>™</sup>  
HIGH-DEFINITION MULTIMEDIA INTERFACE



## 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.

## Specifications

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); HDCP 2.2 Compatible; Consumer Electronics Control (CEC)
Max. Resolution	Up to 4096 x 2160 / 3840 x 2160 @ 60Hz (4:2:0); 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); 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)
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 AC220V:78.1W:366BTU
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 (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



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