

# 4x4 4K HDMI Matrix Switch with Scaler

## VM6404H



reddot award 2015  
winner interface design

- 4K is the next generation of image quality for high definition video. 4K delivers eight million pixels which is four times as much detail as 1080p Full HD resolutions. ATEN's VM6404H 4K HDMI Matrix Switch with Scaler is compatible with the two latest 4K video resolution standards: 3840 x 2160 and 4096 x 2160. The VM6404H provides powerful HD processing to produce 4K resolutions across four displays with crystal clear images.

The VM6404H supports 4K @ 60Hz, HDMI 2.0\* and HDCP 2.2 and features seamless switching that employs a FPGA matrix architecture that ensures continuous video streams, real-time control and stable signal transmissions. With a built-in high-performance scaler, the VM6404H 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 8 connection profiles that can be customized into different video wall layouts.

\*HDMI 2.0 supports 3840 x 2160 @ 30 Hz (4:4:4), 3840 x 2160 @ 60 Hz (4:2:0), 4096 x 2160 @ 30Hz (4:4:4), 4096 x 2160 @ 60 Hz (4:2:0) resolutions

The VM6404H 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 reporting.



Front view



Rear view



## Features

- 4x4 HDMI input/output connections
- Multiple means for system configuration including front-panel pushbuttons, IR, 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 to form a 2x2 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
- **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.

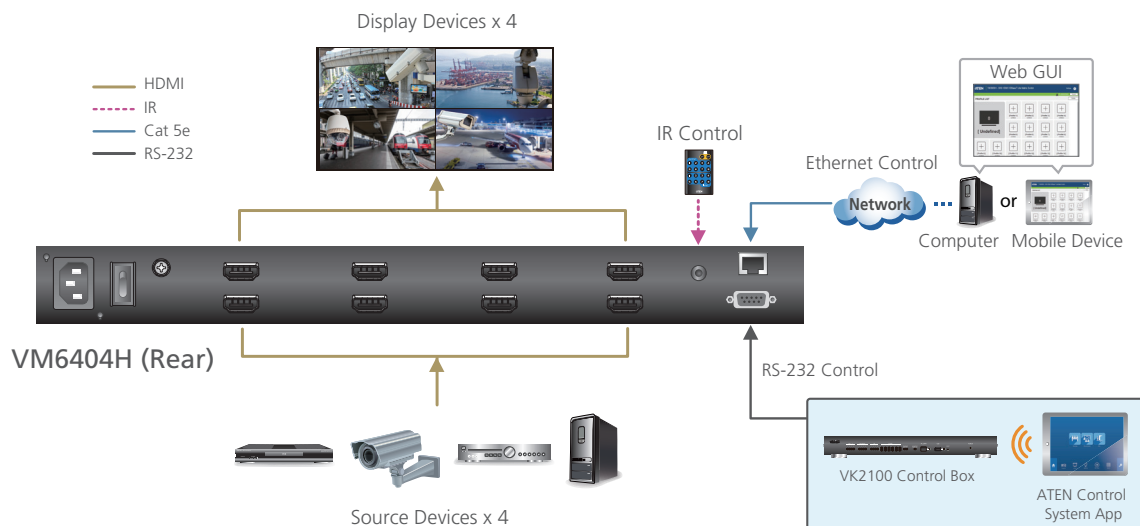
## Highlights

### Video Wall

The VM6404H is equipped with video wall functionality integrated through an easy to use web GUI. The video wall functionality provides up to 8 profiles that you can customize into layouts by setting the display outputs in accordance to your preference, designed from an easy to use web GUI. Through profile setup you can form a single large screen or a variation of multiple screens in different layouts – to see what you want, how you want it.

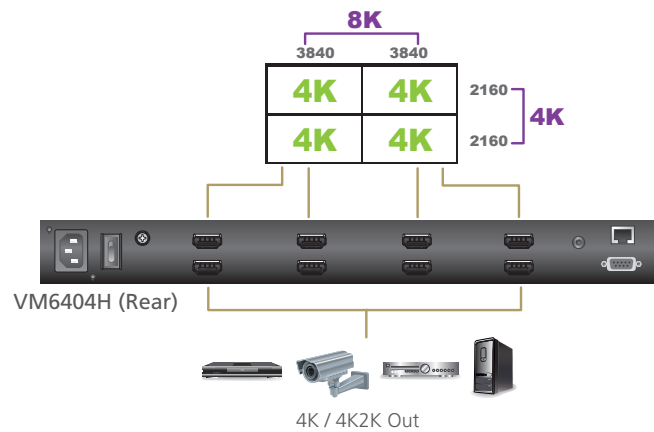
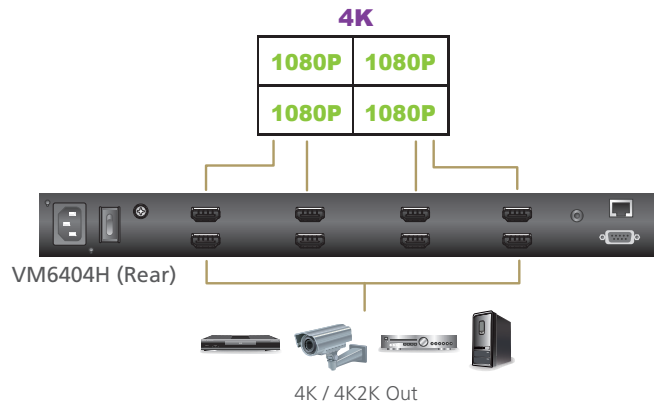
### Smooth and Seamless Viewing Experience

The VM6404H'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 at up to 4K @ 60 Hz to minimize latency.

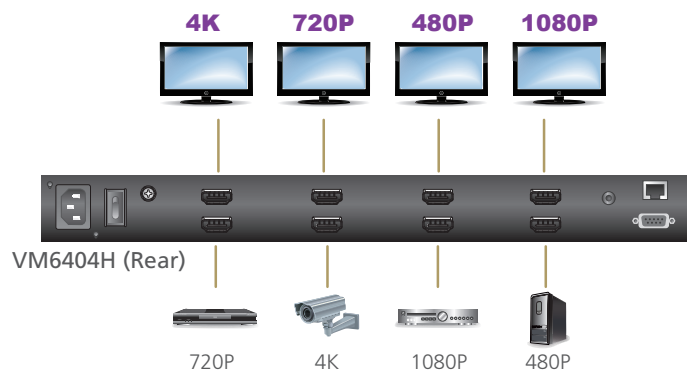


## Video Wall

- Each output supports a resolution up to 4K. When a 2x2 video wall is applied, an 8K resolution can be utilized.



- The VM6404H scales the resolution of different source devices to fit the resolution of various types of displays so that each provides a perfect picture.



# Specifications

Function	VM6404H
<b>Video Input</b>	
Interface	4 x HDMI Type A Female (Black)
Impedance	100 Ω
Max. Distance	1.8 m
<b>Video Output</b>	
Interface	4 x HDMI Type A Female (Black)
Impedance	100 Ω
Max. Distance	15 m
<b>Video</b>	
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
<b>Control</b>	
RS-232	<b>Connector:</b> 1 x DB-9 Female (Black) <b>Baud Rate and Protocol:</b> Baud Rate: 19200, Data Bits: 8, Stop Bit: 1, Parity: No, Flow Control: No
IR	1 x Mini Stereo Jack Female (Black)
<b>EDID Settings</b>	EDID Mode: Default / Port 1 / Remix / Customized
<b>Power</b>	
Connectors	1 x 3-prong AC Socket
I/P Rating	100 - 240 VAC; 50 - 60 Hz; 1.0 A
Consumption	120 VAC, 47.6 W; 230 VAC, 47.5 W
<b>Environmental</b>	
Operating Temperature	0° to 50° C
Storage Temperature	-20° to 60° C
Humidity	0 - 80% RH, Non-Condensing
<b>Physical Properties</b>	
Housing	Metal
Weight	4.72 kg
Dimensions (L x W x H)	43.24 x 30.73 x 4.40 cm

Product information is subject to change without prior notice.

## ATEN International Co., Ltd.

3F., No.125, Sec. 2, Datong Rd., Sijhih District., New Taipei City 221, Taiwan  
 Phone: 886-2-8692-6789 Fax: 886-2-8692-6767  
 www.aten.com E-mail: marketing@aten.com

Publish Date: 05/2020 V4.0



© Copyright 2020 ATEN® International Co., Ltd.  
 ATEN and the ATEN logo are trademarks of ATEN International Co., Ltd.  
 All rights reserved. All other trademarks are the property of their respective owners.