16 x 16 HDMI Matrix Switch with Scaler
VM51616H

reddot award 2015
winner interface design

● The VM51616H is a 16 x 16 HDMI Matrix Switch that offers an easy and affordable way to route any of 16 HDMI video and audio sources to 16 HDMI displays, with a quick view of all port connections via the front panel LCD or local HDMI output for multiple source preview.

The VM51616H features seamless switching that employs an FPGA matrix architecture to ensure continuous video streams, real-time control and stable signal transmissions. With a built-in high-performance scaler, the VM51616H easily converts various input resolutions to optimum output display resolutions, giving viewers the best video and picture quality across all displays. The switch integrates video wall function with an intuitive web GUI that allows you create 32 connection profiles that can be customized into different video wall layouts.

The VM51616H is an ideal solution for applications that require multiple HDMI displays with multiple HDMI sources to be conveniently delivered to multiple locations, such as railway stations, competition venues, casinos, control centers, conference rooms, logistics centers, security management, and more.

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

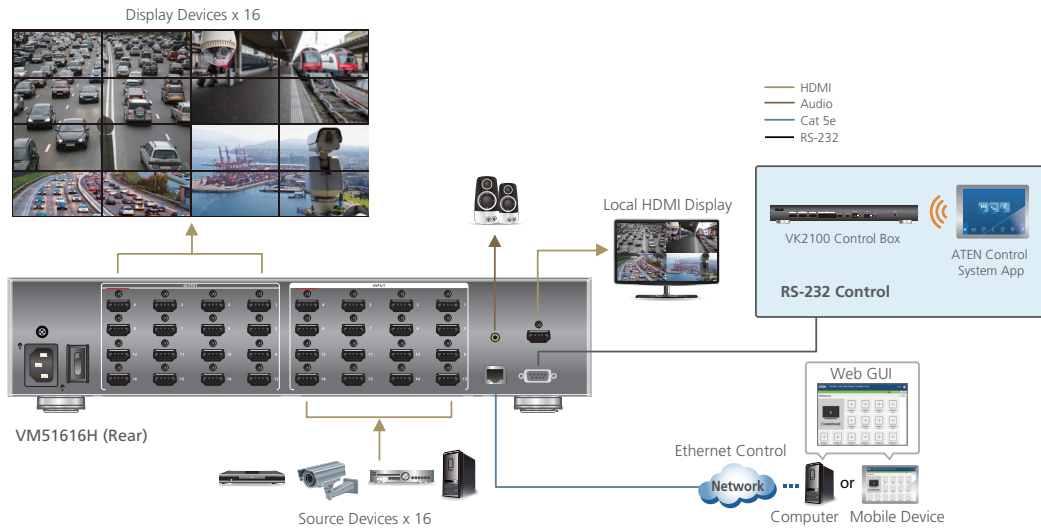VM51616H Front view

VM51616H Rear view

Features

- Connects any of 16 HDMI sources to any of to 16 HDMI displays
- Multiple means for system configuration including front-panel pushbuttons, RS-232 control, and Ethernet connections for web-based GUI or Telnet
- Seamless Switch™ – features close-to-zero second switching for continuous video streams, real-time switching, and stable signal transmissions*
- Scaler – features a video scaling function to convert input resolutions to the optimum display resolutions
- 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 resolution across different screens
- FrameSync – prevents image tearing by synchronizing the scaler output frame rate to the input signal frame rate
- Superior video quality – HDTV resolution of 480p, 720p, 1080i and 1080p (1920 x 1080)
- HDMI (3D, Deep color); HDCP 1.4 compatible
- Consumer Electronics Control (CEC) support
- Local HDMI output – allows multiple preview of 16 video sources
- Audio-enabled; HDMI audio can be extracted to stereo audio
- Supports Dolby True HD and DTS HD Master audio
- ESD protection for HDMI
- Rack-mountable (2U 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 VM51616H 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 32 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".
Scaler	The VM51616H is equipped with a high-performance 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 VM51616H'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/output ports – supporting TMDS high data transfer rates of up to 1080p / 1920 x 1200 @ 60Hz to minimize latency.
Multiple Source Preview	The VM51616H is designed with a local HDMI output port that allows users to monitor the input sources in real time. Through the HDMI connection, users can directly preview up to 16 sources over one single display to quickly check on source status anytime from the local side. Moreover, the viewing mode of the local display can be easily set as array of 1x1, 2x2, or 4x4 via the web GUI according to different application demand.

Display Devices x 16

HDMI
Audio
Cat 5e
RS-232

Local HDMI Display

VK2100 Control Box

ATEN Control System App

RS-232 Control

VM51616H (Rear)

Web GUI

Ethernet Control

Network

or

Computer   Mobile Device

Source Devices x 16

Specifications

Function	VM51616H
Video Input	
Interfaces	16 x HDMI Type A Female (Black)
Impedance	100 Ω
Max. Distance	up to 5m
Video Output	
Interfaces	16 x HDMI Type A Female (Black); (Array Mode): 1 x HDMI Type A Female (Black)
Impedance	100 Ω
Max. Distance	up to 15 m
Video	
Max. Data Rate	6.75 Gbps (2.25 Gbps Per Lane)
Max. Pixel Clock	225 MHz
Compliance	HDMI (3D, Deep Color); HDCP 1.4 Compatible; Consumer Electronics Control (CEC)
Max. Resolution	Up to 1080p
Audio	
Output	1 x Mini Stereo Jack Female (Green)
Control	
RS-232	Connector: 1 x DB-9 Female (Black), Baud rate and protocol: 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 / Port1 / Remix / Customized (EDID Wizard support)
Switches	
Power	1 x Rocker Switch
Power	
Connectors	1 x 3-Prong AC Socket
Maximum Input Power Rating	100-240 VAC; 50-60 Hz; 4.8A
Consumption	120 VAC, 125W ; 230 VAC, 122W
Environmental	
Operating Temperature	0° to 40° C
Storage Temperature	-20° to 60° C
Humidity	0 - 80% RH, Non-Condensing
Physical Properties	
Housing	Metal
Weight	7.86 kg
Dimensions (L x W x H)	43.24 x 38.18 x 8.80 cm

Product information is subject to change without prior notice.