

VM1600A

16 x 16 Modular Matrix Switch



reddot award 2015
winner interface design



The ATEN Modular Matrix Solution Series comprises the VM1600A/ [VM3200 Modular Matrix Switch](#) in tandem with a range of hot-swappable I/O boards. The solution offers real-time control and advanced access to manage 16/32 video sources and 16/32 displays simultaneously, through modular I/O boards in a single chassis. Empowered by ATEN Seamless Switch™ technology, the VM1600A/[VM3200 video matrix](#) switches incorporate a speed-progressive video switching function and a unique scaler that integrates seamlessly with video wall systems.

The ATEN Modular Matrix Solution is easily expandable and ideal for large-scale A/V applications such as broadcasting stations, traffic and transportation-related control rooms, emergency service centers, and any application that requires customizable, high-speed A/V signal routing.

Boasting a sophisticated and intuitive design to deliver the best audio/visual distribution and control, reliability and lowest maintenance costs, the solution also incorporates ATEN's Red Dot Award-winning GUI that can be accessed from anywhere over a network or the internet. Configuring a video wall or digital signage installation has never been easier.



Features

- Connects any of 16 video sources to any of 16 displays in combination with ATEN Modular Matrix I/O Boards
- Multiple means for system configuration including front-panel pushbuttons, RS-232/422/485 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 resolutions** – up to UHD (3840 x 2160) and DCI (4096 x 2160) with refresh rates of 30 Hz (4:4:4) and 60 Hz (4:2:0)*
- **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*
- **Calendar-based scheduling** – allows profile playing based on the pre-set schedule and RTC
- **EDID Expert** – selects optimum EDID settings for smooth power-up, high-quality display, and use of the best resolutions across different screens
- **Audio-enabled** – HDMI audio can be extracted and stereo audio can be embedded*
- Bi-directional RS-232 channel – allows you to control the connected serial devices simultaneously through the web GUI
- Supports redundant power module for higher reliability
- Hot-swappable design for I/O boards, fan module, and power supplies for easy maintenance and higher reliability
- Enables power supply via HDBaseT with installation of I/O boards and power injectors ([VE44PB](#) recommended), eliminating the need for separately installing power infrastructures to save overall cost
- **Optional redundant power supply** – ensures reliability for mission-critical applications
- Long-Reach mode up to 1080p@150m – enables extended AV transmission using the [HDBaseT™](#) Input/Output board with ATEN [HDBaseT™](#) Class A Video Extenders
- HDCP 2.2 Compatible*
- HDMI: 3D, Deep Color, 4K*
- Consumer Electronics Control (CEC) supported*
- Rack mountable (6U design)

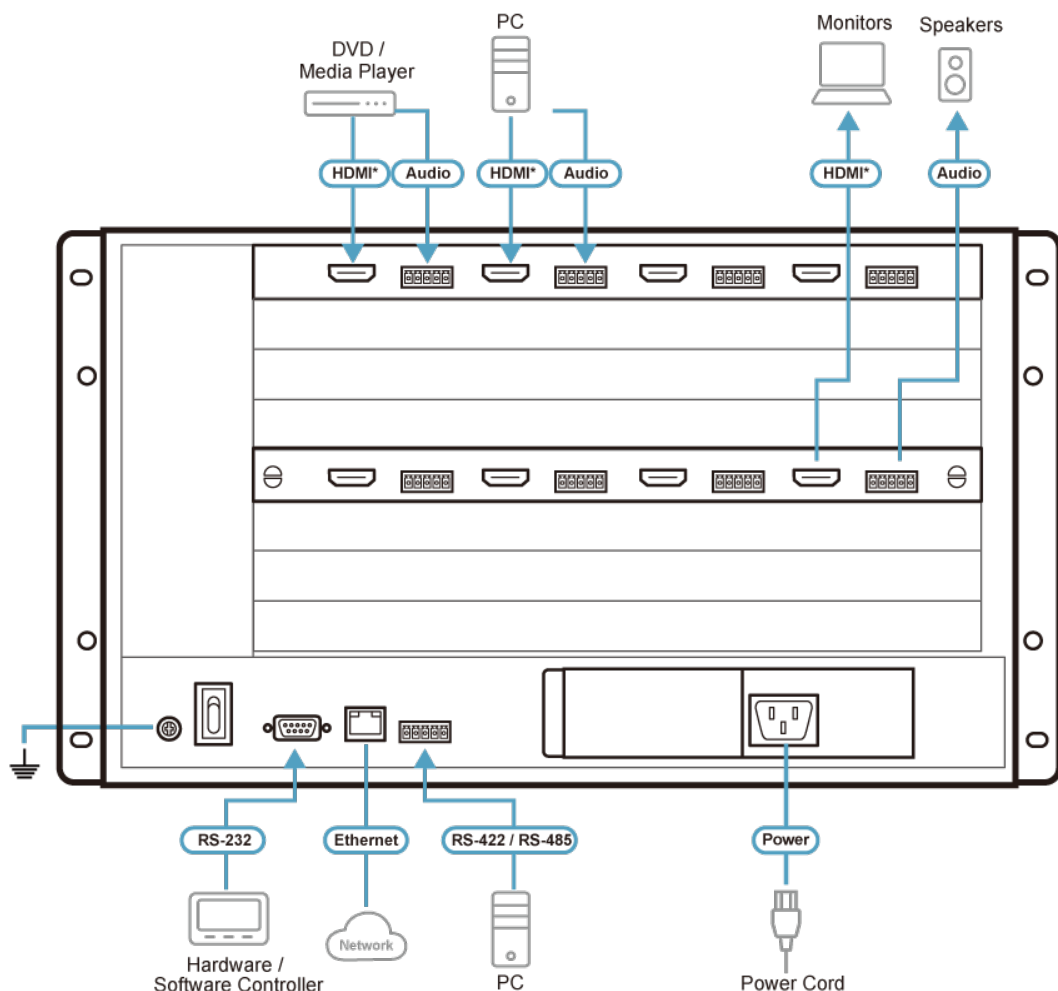
Note:

1. The availability of the features with "*" depends on which I/O board is inserted.
2. 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™.
3. 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

Board Output	4 x Slot
Board Input	4 x Slot
Video Input	
Interfaces	Depends on which I/O board is inserted
Max. Data Rate	15.2 Gbps (3.8Gbps per Lane)
Audio	
Input	Depends on which Input board is inserted
Output	Depends on which Output board is inserted
Control	
RS-232	Connector: 1 x DB-9 Female (Black) Serial Control Pin Configurations: Pin2 = Tx, Pin 3=Rx, Pin 5= Gnd Baud Rate and Protocol: Baud Rate:19200, Data Bits:8, Stop Bits:1, Parity: No, Flow Control: No
RS-485/RS-422	Connector: 1 x Captive Screw Connector, 5 Pole
Ethernet	Connector: 1 x RJ-45 Female
EDID Settings	EDID Mode: Default / Port1 / Remix / Customized (EDID Wizard support)
Connectors	
Power	1 x 3-Prong AC Socket
Power	
Maximum Input Power Rating	100-240 VAC; 50/60Hz; 3/6 A
Power Consumption	AC110V:460W:166BTU/h AC220V:460W:156BTU/h Note: ● The measurement in Watts indicates the typical power consumption of the device with no external loading. ● The measurement in BTU/h indicates the power consumption of the device when it is fully loaded.
Fan	Airflow: 55.2 cfm Operating Voltage: 10.2 - 12VDC Operating Temp: -10 - 60°C
Environmental	
Operating Temperature	0 - 40°C
Storage Temperature	-20 - 60°C
Humidity	0 - 80% RH, Non-Condensing
Physical Properties	
Housing	Metal
Weight	15.11 kg (33.28 lb)
Dimensions (L x W x H)	48.20 x 46.66 x 26.59 cm (18.98 x 18.37 x 10.47 in.)
Rack Height (U Spaces)	6U
Carton Lot	1 pc
Note	For some of rack mount products, please note that the standard physical dimensions of WxDxH are expressed using a LxWxH format.

Diagram



VM1600A
Rear View

* The video interface differs depending on the I/O board that installed.

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