# 32 x 32 Modular Matrix Switch

## VM3200

The VM3200 Modular Matrix Switch offers advanced access and real-time control of multiple local and remote A/V input devices and displays from a single chassis. The VM3200 allows users to independently switch and route video and/or audio content directly to various monitors, displays, projectors, and/or speakers simply by pressing front panel pushbuttons. A built-in Scaler encodes the video format in order to provide seamless, real-time switching. The front panel LCD shows a quick view of active port connections. The switch also includes an option to select an EDID Mode that yields the best resolution across different monitors.

The VM3200 is easily expandable and accommodates a lineup of hot-swappable ATEN I/O boards. Equipped with automatic signal conversion, it allows various combinations of digital video interfaces, including HDBaseT, DisplayPort, HDMI, DVI, 3G-SDI, and VGA. This makes it 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.

VM3200 Front view

VM3200 Rear view

# Features

- Connects any of 32 video sources to any of 32 displays in combination with ATEN Modular Matrix Solutions
- Supports 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 video scaling function to convert input resolutions to the optimum display resolutions
- Seamless Switch™ – features close-to-zero second switching that provides continuous video streams, real-time switching and stable signal transmissions*
- Video Wall – allows you to create custom video wall layouts via intuitive web GUI
- Live Streaming – supports single source live streaming via web GUI for convenient evaluation of display output
- Content and Layout Preview – displays thumbnails of source media in web GUI, simplifying profile configuration
- EDID Expert™ – selects optimum EDID settings for smooth power-up, high-quality display and use of the best resolution across different screens
- Audio-enabled – HDMI audio can be extracted, and stereo audio can be embedded (HDMI I/O boards)
- Calendar-based scheduling – allows profile playing based on the pre-set schedule and RTC
- Multiple Control Methods – system management via front-panel pushbuttons, RS-232, RS-485/422, and Ethernet (Telnet / Web GUI) connections
- View and control via ATEN Video Matrix Control App in a swift and agile way
- Hot-swappable design for I/O boards, fan module, and power supplies for easy maintenance and higher reliability
- Flexible system expandability via hot-swappable tool-free installation of I/O boards
- 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*
- ESD protection for HDMI
- Rack mountable (9U 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.

# Highlights

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|---|---|
| **Flexible Integration** | The VM3200 can be configured with up to 32 video sources x 32 displays, with a flexible installation process that allows integration of different video interfaces and encoding of various video formats to customize system configurations for each application. The I/O slots are hot-swappable, making it easy and convenient to switch between multiple video sources and displays. |
| **Smooth and Seamless Viewing Experience** | The VM3200 has a Scaler and CrossPoint design that unifies video formats and provides continuous video streams, real-time switching, and stable signal transmissions. The VM3200 is also capable of high-speed switching between all input/output ports – supporting high data transfer rates of up to 15.2 Gbps/ch to minimize latency and increase the processing power for time-critical video applications. |

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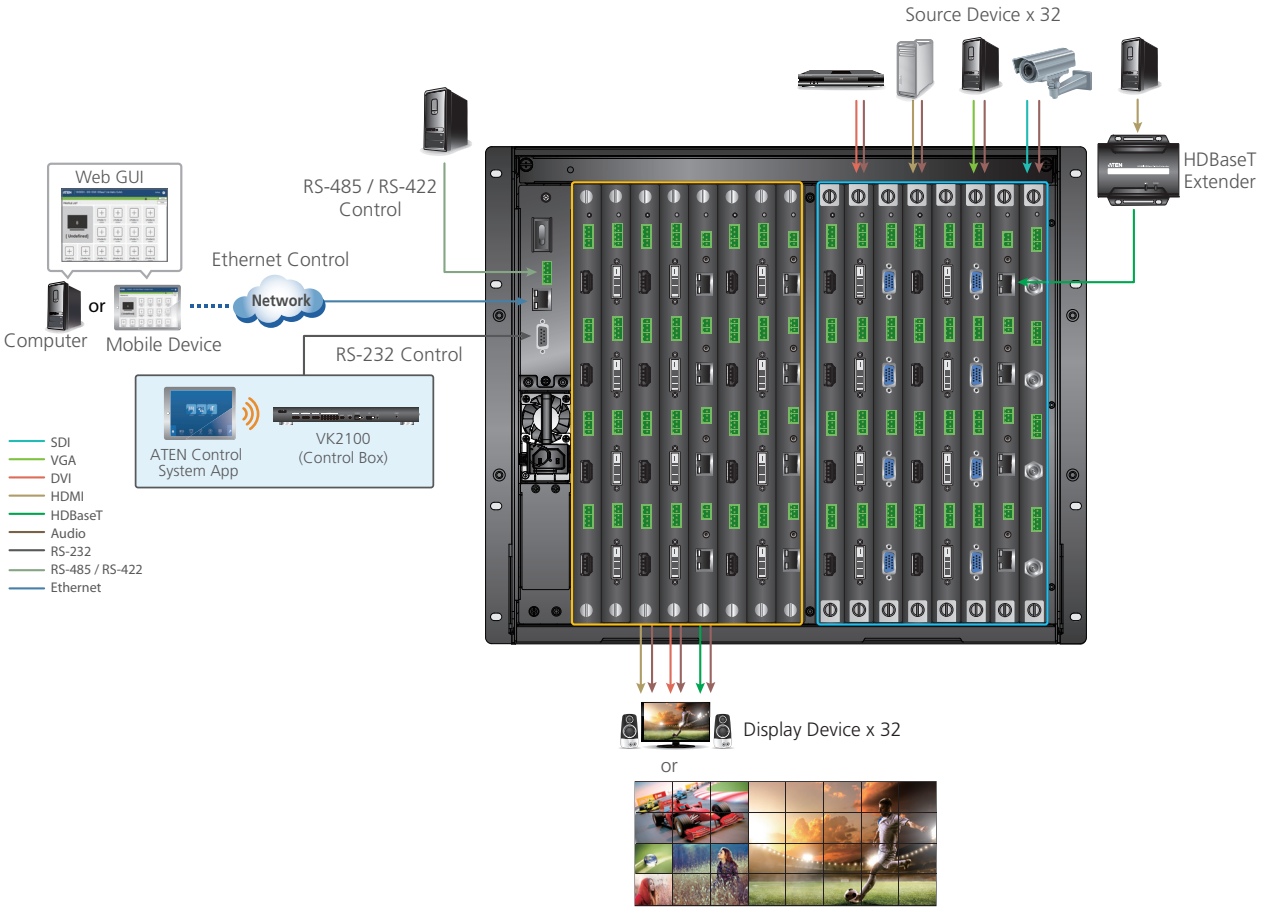
| **Hot-pluggable Modular Fan and Redundant Power** | Overheating slows down device performance significantly and can result in equipment breaking down mid-operation. The VM3200 is equipped with fan modules to ensure that a cooling system is always in place and working. The fans are hot-pluggable and can easily be replaced without shutting down the system. The VM3200 has two power slots that can connect to two different power supplies. If the primary power fails, the secondary power supply can automatically take over. ATEN ensures that your investment is protected while delivering outstanding performance. |
| **Video Wall** | The VM3200 is equipped with Video Wall functionality integrated with a Scaler and Cross Point design that ensures all input sources are processed at the same time so that the video content is delivered across all screens with no delays or signal loss. The video wall functionality provides up to 64 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.   |
| **Audio Separation** | The VM3200 provides the capability to separate audio signals from their corresponding video signals, including both HDMI extracted audio and embedded stereo audio. This allows the audio and video signals from one source device to be switched and sent out to different destinations. |



# Optional Equipments

## Available Input and Output Boards

| Input Boards | Output Boards |
|---|---|
|  VM7514 (HDBaseT Input Board) |  VM8514 (HDBaseT Output Board) |
|  VM7904 (DisplayPort Input Board) | – |
|  VM7814 (4K HDMI Input Board) |  VM8814 (4K HDMI Output Board) |
|  VM7804 (HDMI Input Board) |  VM8804 (HDMI Output Board) |
|  VM7604 (DVI Input Board) |  VM8604 (DVI Output Board) |
|  VM7404 (3G-SDI Input Board) | – |
|  VM7104 (VGA Input Board) | – |

| Combination | Matrix Switch | VM3200 | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Input Board | VM7514 | VM7904 | VM7814 | VM7804 | VM7604 | VM7404 | VM7104 |
| | Output Board | VM8514 | | VM8814 | VM8804 | VM8604 | | |
| Interface | | HDBaseT (RJ-45) | DisplayPort | HDMI | HDMI | DVI | 3G-SDI (BNC) | VGA |
| Max Video Resolution | | 4K@60Hz (4:2:0)[a] | 4K@60Hz (4:2:0)[a] | 4K@60Hz (4:2:0)[a] | 1920 x 1080 | 1920 x 1200 | 1920 x 1080 | 1920 x 1200 |
| Max Distance | Input | 100m | 5m | 5m | 5m | 5m | SD: 300 m<br>HD:150 m<br>3G:100 m | 1.8m |
| | Output | 100m | N/A | 15m | 15m | 5m | N/A | N/A |
| Audio | | N/A | • | •[b] | •[b] | •[b] | •[b] | •[b] |
| Scaler | | VM8514 + VE805R / VE816R[c] | N/A | VM8814 | VM8804 | VM8604 | N/A | N/A |
| Video Wall | | VM8514 + VE805R/ VE816R[c] | N/A | VM8814 | VM8804 | VM8604 | N/A | N/A |
| Seamless Switching | | VM8514 + VE805R / VE816R[c] | N/A | VM8814 | VM8804 | VM8604 | N/A | N/A |
| FrameSync | | VM8514 + VE816R[c] | N/A | VM8814 | N/A | N/A | N/A | N/A |
| Cable Quality Tester | | VM8514 + VE816R[c] | N/A | • | N/A | N/A | N/A | N/A |
| Long Reach Mode (1080p@150m) | | •[d] | N/A | N/A | N/A | N/A | N/A | N/A |
| RS-232 Channel | | • | N/A | N/A | N/A | N/A | N/A | N/A |
| IR Channel | | • | N/A | N/A | N/A | N/A | N/A | N/A |

**Note :**

a. 4K resolutions are only available when the Scaler is disabled. When the Scaler function is implemented, the highest resolution available is 1080p. The Scaler function is enabled by default.

b. HDMI audio signal can be extracted as stereo audio. Stereo audio can be embedded into the HDMI audio output.

c. For the VM8514, certain functions are only available when used with the appropriate extenders.

d. Long Reach mode (1080p@150m) is only available when the HDBaseT™ Input/Output board used with ATEN HDBaseT™ Class A Video Extenders.

## Available Accessories

| VM-PWR800 | Video Matrix Power Module |
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| Input voltage | 100 - 240Vac |
| Power Consumption | Max. Load 800 W |
| Operating temp. | 0˚ to 40˚ C |

| VM-FAN556 | Video Matrix Fan Module |
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|---|---|
| Airflow | 55.2 cfm |
| Operating voltage | 10.2 - 12Vdc |
| Operating temp. | -10˚ to 60˚ C |

## Rack Mount Kits (Optional)

| Easy Installation Rack Mount Kit | Rack Depth |
|---|---|
| 2X-034G (Short) | 41 to 72 cm |
| 2X-035G (Long) | 68 to 108 cm |

# Specifications

| Function | VM3200 |
|---|---|
| **Board Input** | 8 x Slot |
| **Board Output** | 8 x Slot |
| **Video Input** | |
| Interfaces | Depends on which I/O board is inserted |
| Max. Data Rate | 15.2 Gbps (3.8 Gbps 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)<br>Serial Control Pin Configurations:<br>Pin2 = Tx, Pin 3=Rx, Pin 5= Gnd<br>Baud Rate and Protocol:<br>Baud Rate:19200, Data Bits: 8, Stop Bits:1, Parity: No, Flow Control: No |
| RS-485/RS-422 | 1 x Captive Screw Connector, 5 Pole |
| Ethernet | 1 x RJ-45 Female |
| **EDID Settings** | EDID Mode: Default / Port1 / Remix / Customized (EDID Wizard support) |
| **Power** | |
| Connectors | 1 x 3-Prong AC Socket |
| Max. Input Power Rating | 100 - 240 VAC; 50 - 60 Hz; 1.0 A |
| Consumption | 800W (Max.)<br>*A power module can be purchased for power redundancy. |
| **Environmental** | |
| Operating Temperature | 0° to 40° C |
| Storage Temperature | -20° to 60° C |
| Humidity | 0 - 80% RH, Non-condensing |
| **Physical Properties** | |
| Housing | Metal |
| Weight | 18.20 kg (chassis only) |
| Dimensions (L x W x H) | 48.20 x 47.19 x 39.90 cm |
| Rack Height (U Spaces) | 9U |

*Product information is subject to change without prior notice.*

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