

### VW1608

16 x 8 Modular Video Wall Processor



**High-Motion Visuals,  
Flexible Multi-View Control**

**4K TRUE** 16x08 / 36x20  
Modular Video Wall Processor

VW3620 VW1608

**iF DESIGN AWARD 2024**  
rediff winner 2024

**GOOD DESIGN AWARD 2023**

# The future of video wall control starts here!



#### Video Wall Processor for Demanding Environments

The VW1608 is a modular 4K video wall processor that manages 16 input sources and 8 displays from a compact 4U chassis. It delivers stunning visual clarity, intelligent control and monitoring, high scalability, and rock-solid reliability – ideal for war rooms, control centers, auditoriums, and digital signage applications.

#### Precision Visual Performance

##### True-to-Life Visual Fidelity

The VW1608 delivers true 4K60 4:4:4, presenting every source with crystal-clear detail and accurate color. Its FPGA-based hardware architecture and FrameSync technology ensures tear-free, latency-free visuals even during rapid source switching.

##### Optimized for Any Display Environment

The processor upscales and optimizes content for any display type and size, ensuring every pixel delivers maximum clarity across video walls.



**ATEN's FrameSync**



**Without ATEN's FrameSync**



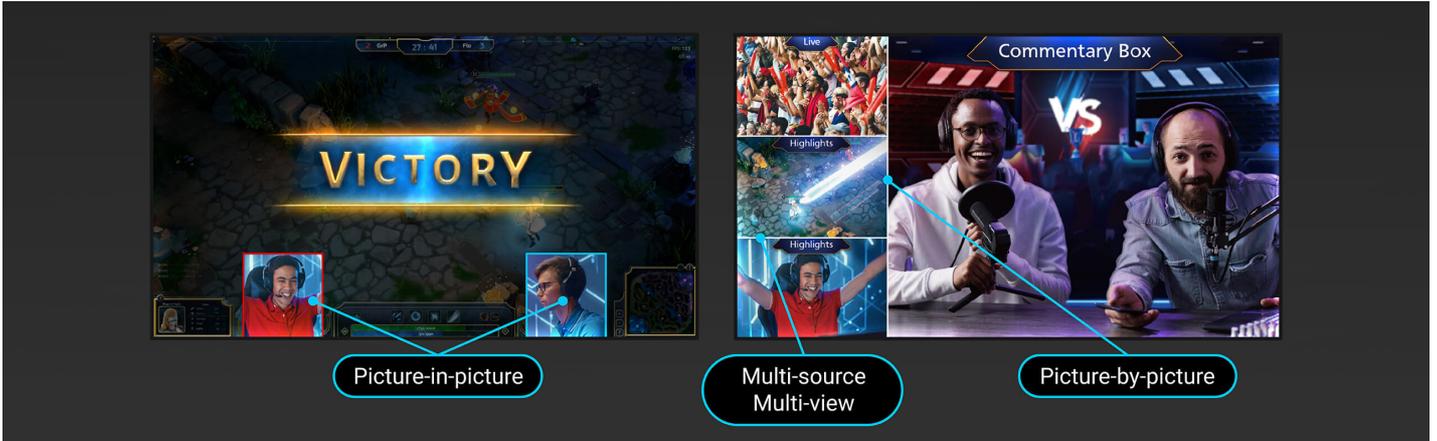
**Maximize Screen Efficiency and See More at Once**

**Flexible Multi-Window Control for Higher Productivity**

Optimizes screen space with flexible window layouts, including overlapping, picture-by-picture and picture-in-picture. The VW1608 supports up to four canvases on a video wall, each with independent sources, resolutions, and layouts – ideal for tailored, dynamic displays.

**Pixel-Perfect Cropping for Focused Visuals**

Video content can be cropped at the pixel level to highlight key details for a more engaging viewing experience.



Picture-in-picture

Multi-source Multi-view

Picture-by-picture

**Scalable Architecture that Grows with You**

**Modular Design for Effortless Expansion**

The VW1608's 4U chassis features 4 input and 2 output board slots, supporting 16 sources and 8 displays, with a modular design for easy upgrades. The redundant power modules and a hot-swappable cooling fan module ensure maximum uptime.

**Scalable to 24 Displays with Daisy-Chain Integration**

The VW1608 offers exceptional scalability and failover via daisy-chaining, enabling up to three units to be linked for a total of 24 display outputs. This design protects your investment and adapts to projects of any size.



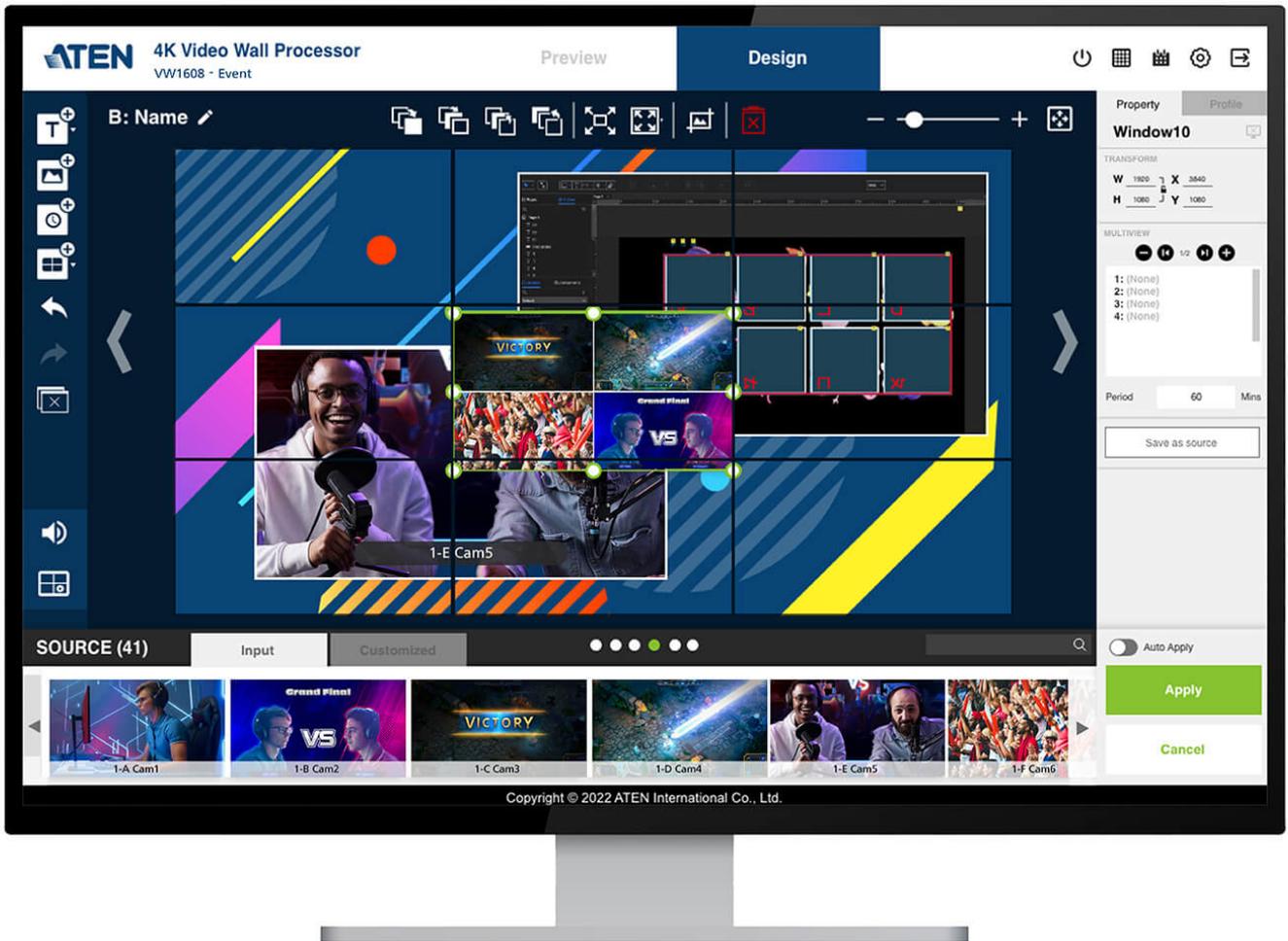
CPU Board Slot

Local User Console

Input Board Slots x 4

Output Board Slots x 2

Power Board Slot



**Seamless Control**

**Remote and Local Previews for Intuitive Control**

The Web GUI enables real-time drag-and-drop layout control, while the local HDMI output provides live previews to verify adjustments – such as repositioning a feed or adding an overlay – before going live.

**Seamless Integration for Streamlined Operations**

Integration with third-party control platforms via RESTful API, Telnet, and RS-232, VW1608 delivers an intelligent and simplified control experience.

**Mission-Critical Reliability**

**Redundant Architecture for Continuous Uptime**

Deploy two VW1608 units to create a high-availability cluster, featuring real-time mirroring and automatic failover that keeps your video wall running even if the primary unit becomes unavailable. With built-in redundancy, hot-swappable modules, the VW1608 ensures continuous operation.

**Auto-Backup Protection for Mission-Critical Stability**

Automatic configuration backup and recovery protect against system or network failures, keeping mission-critical environments running smoothly 24/7.

**Applications**

War Room

For war room applications, the VW1608 enables multi-source visualization, flexible multi-window layouts, multi-canvas dashboards, and redundancy, enabling operators to monitor live feeds, highlight critical information, and maintain uninterrupted situational awareness.





**Control Room / Surveillance Room**

For control room scenarios, the VW1608 provides real-time 4K multi-source switching, flexible multi-window management, four-canvas information integration, and redundancy, ensuring smooth display of multiple sources, controllable key visuals, and uninterrupted 24/7 operation.

**Auditorium**

For auditoriums, the VW1608 delivers high-resolution multimedia output, flexible window layouts, real-time cropping and overlay display, ensuring clear and impactful performance and presentations on large screens while managing multiple audio-visual sources simultaneously.



Talk to Our Experts

If you prefer to have ATEN contact you, please complete the form and a representative will be in touch with you shortly

First Name \*

Last Name \*

- Country \*

Company \*

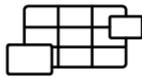
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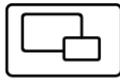
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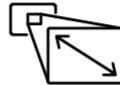




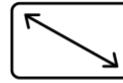
Independent Canvases



Overlay Window Management



Pixel-perfect Cropping



Diverse LED Display Compatibility

Features

• **4U modular chassis with ample slot amount for system control and expansion**

- Accepts up to 16 HDMI input ports and 8 HDMI output ports
- Compact, yet competent for LED video walls in small-to-medium sized mission-critical environments
- Modular board compatibility – Contains 7 board slots (4 input card slots, 2 output card slots, and 1 CPU board slot) to support multiple I/O boards for flexible configuration and future expandability

• **Superior Visual Quality for Mission-Critical Communications**

- FPGA architecture – supports True 4K inputs, near-zero-second seamless source switching, and outputs without delay
- True 4K@60Hz (4:4:4) scalability – supports custom resolutions and enables upscaling of video signals for crystal clear, accurate imagery regardless of the display size or type from LED, LCD, DLP, to other large screens
- Decodes high density H.265 / H.264 IP channels (via [VW754](#)) – ideal for surveillance control rooms and real-time monitoring scenarios
- Advanced video wall engine – allows easy window management via cropping, overlapping, picture-by-picture, picture-in-picture, bezel compensation, and more
- Multi-resolution support – allows mix-and-match of displays of different resolutions
- FrameSync – ensures that all output signals remain synchronized to prevent image tearing and frame mismatch, providing seamless playback across multiple displays
- EDID Expert™ – selects optimum EDID settings for smooth power-up, high quality display and use of the best video resolution across different screens
- Customizable logos / color schemes / calendar / clock / scrolling texts

• **Reliable 24/7 Operation**

- Backup Mode 2x VW1608s daisy chain – the secondary unit continuously mirrors all system settings and configurations from a primary one in real time and takes control automatically when primary unit malfunction occurs for uninterrupted display performance
- Expansion Mode with 3x VW1608s daisy chain – up to 24 display outputs supported for larger video wall installation with centralized control being conducted by the primary unit while ensuring synchronized video output clocks across all units and consistent, frame-accurate playback without tearing
- Optimum component redundancy via a hot-standby CPU control board, dual redundant power boards (2 slots), and hot-swappable I/O boards as well as fan module

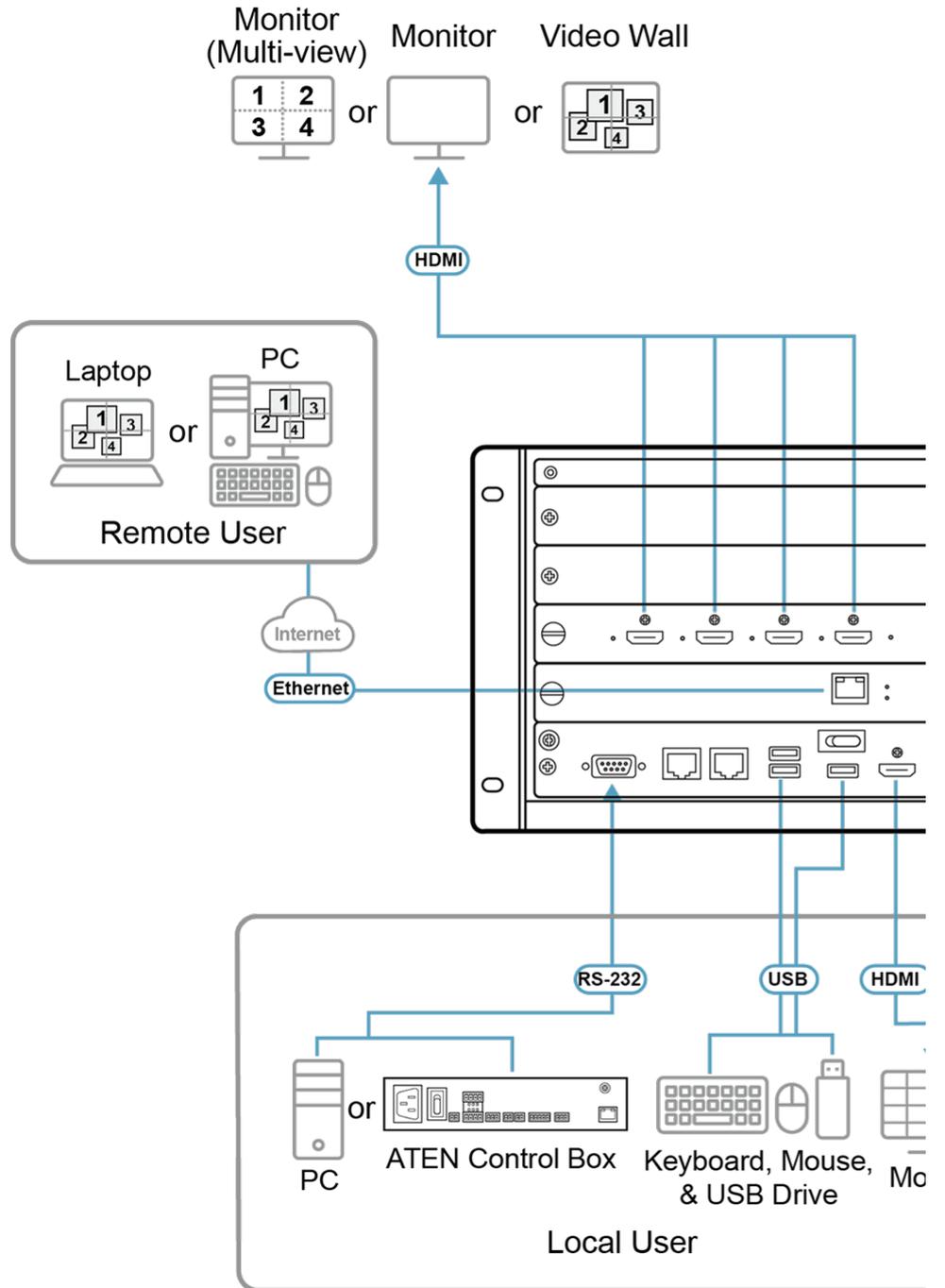
• **Direct and Remote Configurations and Control Methods**

- Direct control via RS-232 / Ethernet and the front panel buttons
- Local HDMI output – monitor input signals and video wall layouts via Single / Array mode at up to 1080p in real-time from one display
- Remote control via web GUI, Telnet, and SSH to preview input signals in real-time and control outputs including content placement and management of up to 4 canvases
- Multiview – source monitoring in 2 x 2 or 4 x 4 layouts from a single display
- Integration with [ATEN Control System](#) and the 3rd party devices via RS 232 / Ethernet / RESTful API
- Built-in USB Type-A ports – video wall background image change and firmware upgrade

Specifications

Board Input	4 x Slot, up to 16 4K inputs (Note: top 2 Slots can be used for Function Board)
Board Output	2 x Slot, up to 8 True 4K outputs
Video Input	
Interfaces	Depends on which I/O board is inserted
Video Output	
Interfaces	Local Output: 1x HDMI Type A Female (Black)
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
Ethernet	Connector: 1 x RJ-45 Female
USB	3 x USB Type A Female (White) Note: Currently the USB ports support storage and firmware upgrade.
EDID Settings	EDID Mode: Default / Port1 / Remix / Customized (EDID Wizard support)
Communication	
Daisy Chain Ports	RJ45 x2
Connectors	
Power	1 x 3-Prong AC Socket
Power (Optional)	Redundancy, Optional Hot Swap PSU
Power	
Maximum Input Power Rating	100-240 VAC; 50-60Hz; 10A
Power Consumption	AC110V:550W:326BTU/h AC220V:550W:324BTU/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.
Environmental	
Operating Temperature	0 - 40°C
Storage Temperature	-20 - 60°C
Humidity	0 - 80% RH, Non-Condensing
Physical Properties	
Housing	Metal
Dimensions (L x W x H)	48.20 x 46.61 x 17.67 cm (18.98 x 18.35 x 6.96 in.)
Weight	11.65 kg ( 25.66 lb )
Rack Height (U Spaces)	4U
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





Simply Better Connections

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