



*Information assurance means increased operator efficiency with the visualization of more information and ability to seamlessly switch between systems*

# Matrox Video: Setting The Course For Cutting-Edge Content Management

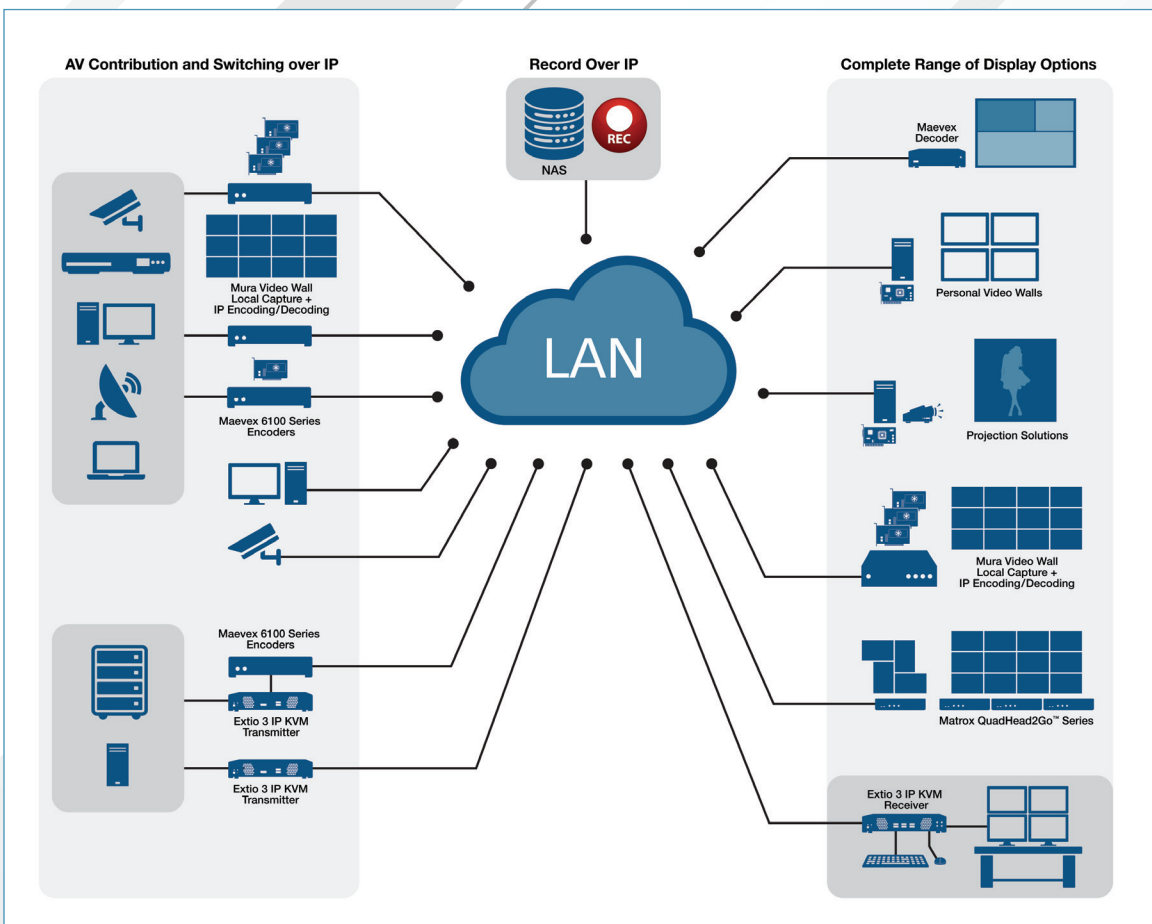
Paramount to the success of those operating in the defense and military sector is a keen sense of information assurance, situational awareness and performance edge. High-value content management, therefore, is critical to ensuring those leading national security endeavors have the required capability to analyze intelligence and respond rapidly in dynamic environments. Matrox Video is the premier partner helping customers meet this objective now and address the challenges to ensure a productive future.

Throughout its 45-year history, Matrox Video has extensive experience predicting market requirements, identifying customers' unique capability and creating products that solve pressing problems. The company has built a robust capacity for high-end content management around its core technologies for displaying and moving information, supporting open standards and interoperability and placing security as a top priority.

Having set the path forward for getting visual and audio data from anywhere to anyone, Matrox Video now has its sights set on the challenges of information overload. With its content-rich decision-making applications and embrace of artificial intelligence opportunities, the company is poised to ensure operators in the defense and national security space have the necessary information delivered precisely to best execute the mission.

Samuel Recine, Matrox Video's vice president of sales for the Americas and Asia Pacific, says eliminating information overload is a critical enabler to maintaining a decision edge over an adversary.

"It is a benefit to operators to have access to information that could help inform their conversion of that data into



*An example of interoperability between Matrox product lines. A multitude of workflows are possible*

actionable intelligence. But the side effect of ever-increasing information from sensors, drones, and joint operations intelligence is an increased burden on human operators to sift through all that information and extract the most valuable and salient intelligence pertinent to the operation,” Recine said.

With the massive amount of data being generated, command and control operators need the proper capabilities to ensure the ability to process this information and avoid poor decision making and an inability to prioritize tasks.

Matrox Video has a front row seat to eliminating the bottleneck of too much information interrupting operators’ ability to effectively carry out their mission. The company is addressing the challenge with a keen focus on leveraging human-machine assistance to reduce the bombardment of data making its way to users and working with customers on human factors analysis to understand the optimal measures for delivering precise information and cutting down on unnecessary clutter.

Bolstering this endeavor is Matrox Video’s embrace of burgeoning artificial intelligence opportunities. The company is leveraging its ‘record everything’ principles to further the training of new algorithms and capabilities that assist in ensuring operators are delivered the most critical packages of data.

“This is an essential component to the strategy for long-term situational awareness. We understand that as machines keep getting better and as artificial intelligence and pattern recognition technology develops, having large libraries of recorded data will allow solution providers to best understand their content and information,” Recine said. “We’re helping with technologies that support that application, but we’re also trying to make it easier to support as many workflows as possible simultaneously.”

AI and human-machine enhanced decision making will help sift through mass amounts of information and analyze the intelligence, helping to improve customers' situational awareness. Recine cited Matrox Video's interest in compression algorithms that help pare down information to exactly what the operator needs to be successful.

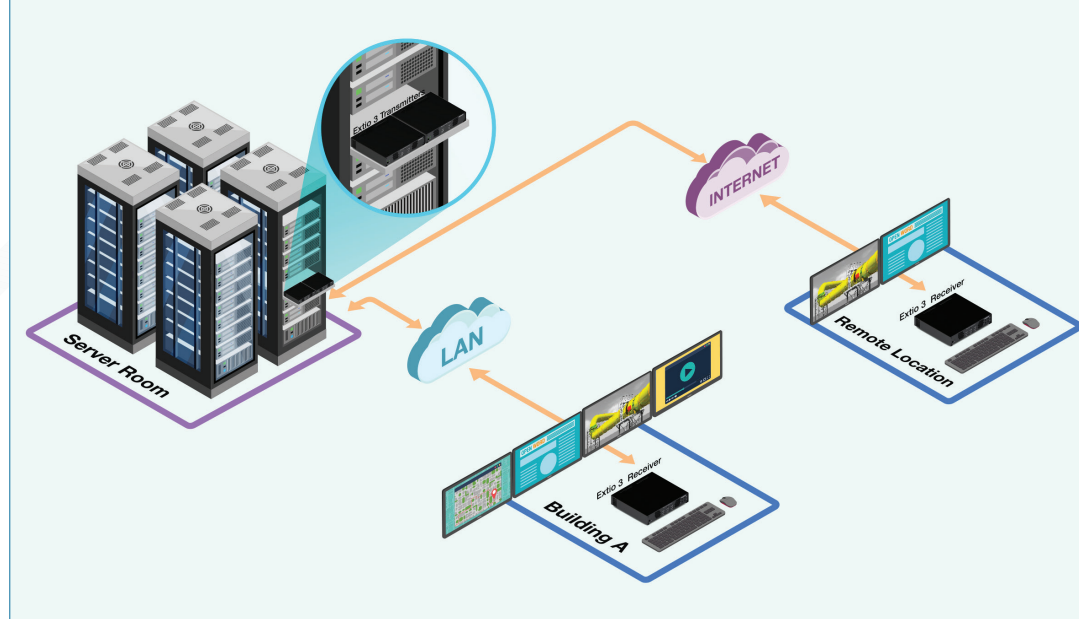
"Before compressed data even hits the operator, it is possible to assess the rules that were used to reduce the size of video information traversing networks and this too is an area that can help with the information reduction exercise," Recine said. "AI must be approached judiciously and with the limits of human operators in mind. The best solutions are the ones that take into account what the stakeholders can handle. And anything that gets decided by machines unsupervised needs to be implemented with the utmost care."

In addition, Matrox Video remains a thought leader in working with customers to study human operators and how those users function in a group to maximize potential for the displaying and sharing of high-value content. Everything from how information is visually laid out, to color schemes, to automation and prioritization cues in data, to ergonomic research about how different operators interact with all manner of stimuli are all contributing to constant progress and improvements in the information overload space. Matrox Video brings in its "record everything" approach to support this effort, ensuring a robust dataset is in place to inform decisions regarding human operator patterns and overall content optimization.

"We believe that having robust high-quality content libraries that are appropriately curated with the correct time-stamps and metadata is a start. Training AI requires significant amounts of information. Our short-term focus is simply recording to assist with application design and ergonomic layouts. But the hope is that this data can be re-leveraged as we learn more about how to do useful feature extraction and pattern recognition in different types of information," Recine said.

A key component of Matrox Video's position as a premier content management partner begins with the company's video wall offerings. The company provides the ability to bring all types of information, from locally captured sources to incoming livestreams, directly to command spaces. The company has built an extensive portfolio in supporting major command and control set-ups with an array of solutions for graphics rendering, video processing, operator station extension, video encoding and decoding and multi-monitor management.

Recine described Matrox Video's offering as 'product platforms' that are designed to operate within federated environments while retaining wholly unique capabilities. Leveraging world-class rendering from GPUs and other visual sources, the goals of Matrox Videos' solutions are to enable useful visualization options for a wide variety of tasks from training all the way to live operations.



*Matrox Extio 3 over the Internet provides secure remote access to KVM installations and connected workstations via LAN, WAN, and the Internet*



*Matrox's product platforms offer a range of solutions from more ergonomic work environments to the ability to utilize and manage content with many different types of equipment*

"These are products that help people move PC information, camera information, video production equipment information and all of the other different types of audio and video equipment and you can basically record it and consume it on-demand later using encoders or you can livestream it and consume it immediately," Recine said. "There's a combination of the security on the product that gives power to the users or the solution providers to lock it down, but we also base all of our technology on open standards and best practices so our products can easily work with other systems," Recine said.

Defense customers require systems that are interoperable, understanding that oftentimes products from an array of providers will need to work together seamlessly to accomplish the mission. Matrox Video meets this demand with a focus on championing industry standards for its hardware and software offerings, ensuring maximum flexibility and compatibility. Matrox Video is also breaking ground in new split computing capabilities, specifically advancing the KVM extension space using over-the-Internet processes to deliver high-quality capability across vast distances.

"In the past, we were able to provide a very high-performance, high-quality experience of KVM extension in a local environment. But we've become so good at this that we can now deliver a world-class experience over the Internet, where the PC can be in one city and the user, with just a little appliance, can be in a different city and have a flawless KVM experience," Recine said.

With its full range of high-performance media management products and global network of service and support experts, Matrox Video is the premier trusted partner for making the most of audio and video content. Security and interoperability are at the forefront of the company's expertise in system design, product life cycles and dedicated support. Matrox Video ensures customers extract maximum value from recorded and live operations.

This extensive history in providing high-end content management capabilities and experience working closely with customers to maximize potential for collaboration is setting the course for future opportunities to solve the toughest challenges in the data and information space. Matrox Video is leveraging its past experience to inform its forward-looking approach, embracing AI-enabled pathways and algorithmic-driven solutions for future success. As a thought leader and premier provider, Matrox Video retains the long-standing commitment to understanding and meeting the unique needs of defense and national security customers.

*Learn more about  
Matrox Video solutions:*

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