Video Walls Made Easy & Secure

Video walls don't have to be complicated. With the right equipment, they can be set up quickly and managed efficiently.

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VIDEO WALLS MADE EASY & SECURE

Informational video walls have been popular for years, and the COVID-19 pandemic appears to have enhanced that popularity.

Figures vary, but one market report predicts the global video wall market will reach US$36.2 billion by 2026, up from US$15.9 billion in 2018. That's a 10.9% compound annual growth rate.

Video walls have long been a feature of flagship retail stores, conference rooms, and entertainment complexes as well as lobbies of corporate headquarters, health care facilities, hotels and other spaces where large groups of people gather. And as the COVID pandemic made it increasingly important to communicate information to large groups of people as quickly as possible, video walls began appearing in more and more locations.

But while the technology behind video walls continues to improve, without the right equipment they can be difficult to deploy and manage.

Challenges remain

The growing popularity of video walls brings with it a growing number of considerations as well.

One of the main issues deployers of video walls face is content management. Content can exist in a looping form to inform or entertain. It can also be interactive and help with the collection of valuable information such as consumer tastes and preferences. It can contain a mix of recorded and live content such as news.

Following close behind are issues with the equipment driving those walls. Some digital signage controllers have limitations on how content is displayed on the screens. Can different screens show different content? Can that content be made interactive? Will there be issues with content lag?

In addition, does the video wall hardware limit how many screens can be incorporated? What happens if the end user wants to expand the wall?

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Are different components going to work together seamlessly, or will interoperability be a problem?

And what role does security play in a video wall deployment? There have been several high-profile incidents in recent years where hackers accessed video walls and displayed inappropriate content. The act of a hacker tapping into a video wall can cause serious damage to a brand's reputation.

As a result of these considerations, end users can be overwhelmed with constantly having to set, change, configure and manage content. Configuring screens to fit unique spaces or creating unique video walls can be a challenge. The equipment needed to set up or expand video walls can be costly. For organizations that deal with sensitive or classified information where content security is a priority, even the remote possibility of a breach is simply unacceptable.

Simplifying the process

One example of the ways industry is working together to keep supporting the growing demands of video walls is the collaboration between BrightSign, a California-based worldwide leader in digital signage media

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players, and Matrox, a Montreal-based provider of advanced visualization and collaboration technologies. BrightSign signage players meet the exacting criteria for digital signage of being small, fanless, industrial-grade tough, high-performance, and ultra-reliable. The Matrox QuadHead2Go leverages these advanced capabilities and offers highly flexible and easy-to-install options for turning one of the 4K outputs of the players into multi-monitor video walls up to four screens that can be configured in innumerable configurations.

Content management is simple with QuadHead2Go's pre-set configurations and easy-to-use "set-and-forget" software. Content creators can design modern and artistic video wall layouts with free rein. Each output can have its own resolution, be independently rotated (90, 180, and 270 degrees), cropped, upscaled, downscaled, and positioned anywhere. The ability to preconfigure the QuadHead2Go makes it versatile for any space. The open-standard appliance can accept content from any source, including digital signage players, media players, laptops, set-top boxes, gaming consoles and more.

Getting technical

Unfortunately, a perception that video walls are complicated to set up and difficult to manage has kept some from taking advantage of the power they offer. The reality, though, is much different. Setting up a 2x2 video wall with a BrightSign player and a Matrox QuadHead2Go Q155 appliance, for example, couldn't be more simple.
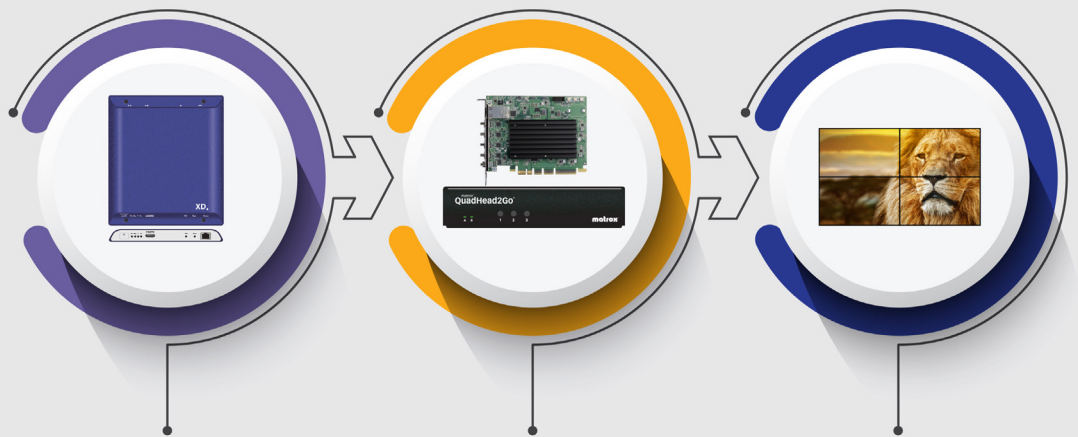
Setup involves taking a BrightSign player (or other content management system) and connecting to the QuadHead2Go Q155 via an HDMI cable. The QuadHead2Go appliance can then power up to four digital displays that can be configured any way the deployer desires.

BrightSign players offer many options for storage of the signage content including solid-state drives (SSDs) or easy-to-swap micro-SD cards. For the security-minded, the SD card slot can be disabled, providing a secure IO, while SSDs can be self-encrypting.

Network access will be required to be able to update content remotely, but the BrightSign player is designed with security in mind. Unlike a PC that can perform a variety of tasks, a BrightSign player is a single-purpose device, decreasing the risk of being hacked. The BrightSign operating system is a locked down embedded Linux implementation and access to the root file by

Available in HDMI input appliance and card form factors, QuadHead2Go Q155 multi-monitor controllers work seamlessly with BrightSign 4K players to drive dynamic, next-generation video walls.

ANY SOURCE. ANY SIZE. ANY CONFIGURATION.

Matrox QuadHead2Go™ Series multi-monitor controllers for dynamic, next-generation video walls

BrightSign 4K Player

QuadHead2Go Series can power any video wall configuration of any possible dimension, from any video source - including BrightSign 4K digital signage player.

QuadHead2Go

Capable of driving four displays from one signal, these controller appliances and PCIe cards provide complete video wall scalability and flexibility.
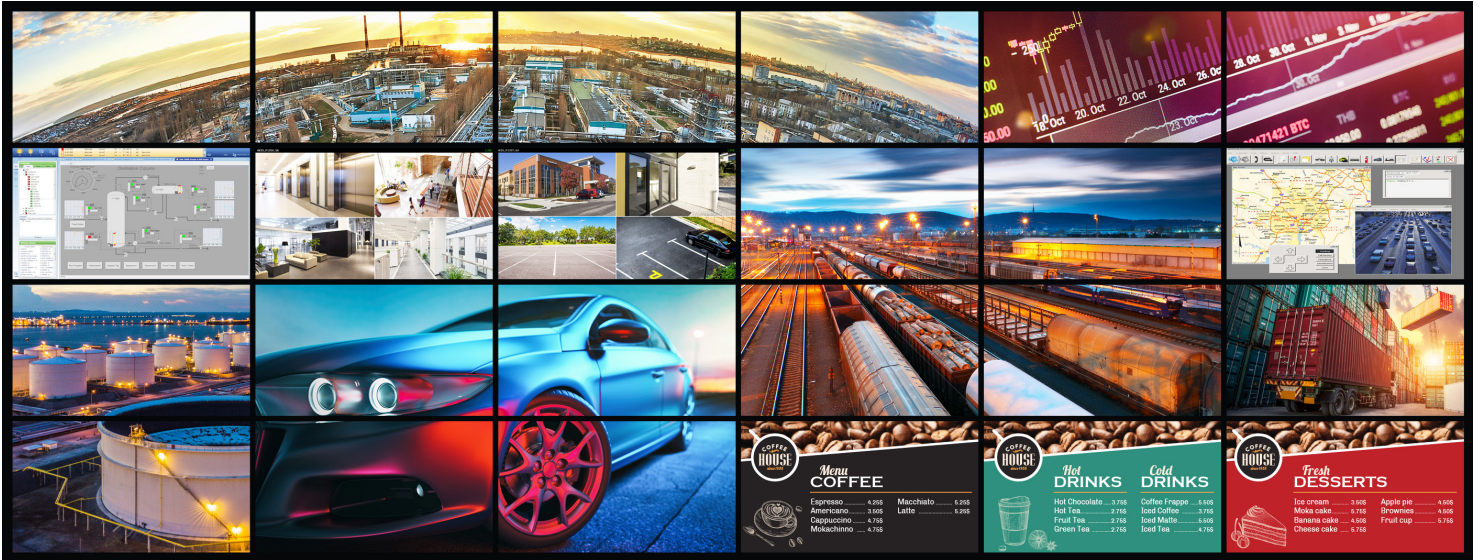
Easy to Deploy Video Walls

Design large-scale and modern artistic video wall layouts with free rein.

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> "The combination of a BrightSign media player and the Matrox QuadHead2Go appliance makes the setup and management of a video wall easy and reliable."

anything not digitally signed by BrightSign is not allowed. And finally, the player can be configured for one-way communication, meaning there's no way for outsiders to gain access. As a bonus, BrightSign players can operate in standalone mode, meaning there's no network access at all.

Video walls of any size can be configured by using multiple QuadHead2Go appliances. Displays can be arranged in 4x1, 1x4, 2x2, 3x1, 1x3, 2x1, or 1x2 rectangular configurations, in portrait or landscape, or in any other non-rectangular/artistic configurations the deployer desires—and combined to create large-scale video walls. Up to three QuadHead2Go appliances can be mounted horizontally or 10 appliances can be mounted vertically in a standard 19-inch rack. The QuadHead2Go appliance can also be mounted to the display itself via an available bracket. The hardware is easy to mount, and both BrightSign and Matrox provide tech support should issues arise.

Video walls have long been shown to attract attention and increase engagement, delivering a brand's message with impact and style. The combination of a BrightSign media player and the Matrox QuadHead2Go appliance makes the setup and management of a video wall easy and reliable.

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Matrox QuadHead2Go Series Multi-Monitor Controllers

Drive four displays from one signal. System-independent, the Matrox® QuadHead2Go™ Series multi-monitor controller is designed to power any video wall configuration of any possible dimension, from any video source—reliably delivering flawless image quality across expansive video wall displays.

- Set up without installing software or even connecting a video source, by using the default configuration of 2x2 in landscape.

- Reduce setup time by using QuadHead2Go's pre-set configurations and built-in images.

- Eliminate physical handling by controlling and updating the cards remotely from anywhere on the network (LAN).

- Ensure compatibility with professional-grade graphics cards with Mini DisplayPort™ 1.2 support—no adapter required.

- Create a video wall from any content source—professional graphics cards and integrated GPUs, video wall controllers, digital signage players, media players, decoders, laptops, NUCs, set-top boxes, gaming consoles, and more.

Source: Matrox

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Co-founded by Lorne Trottier in 1976, Matrox has pioneered a number of innovative hardware and software solutions for an array of high-tech industries. Today, we continue to be at the forefront of cutting-edge technology, working closely with our global stakeholders to solve specific real-world issues.

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