



Setting Standards for Virtual Classrooms of the Future

96-student dvLED concave video walls feature a groundbreaking design for a unique learning environment at a World-Renowned University

CASE STUDY
AUG 2021



Overview

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Approached by [McCann Systems](#) for a world-renowned university, [Peerless-AV®](#) was tasked with installing (2) custom direct view LED (dvLED) video wall systems alongside [Unilumin](#). In January 2019, the university wanted to create remote learning classroom environments, which would allow professors and faculty to move around while speaking and delivering presentations. For the students, the benefit was to be able to invite them into a conversation and present materials to classmates, as if they were attending in-person.



The Challenge

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The main challenge that the university faced was building a completely custom solution that would fit within the existing architecture of the two studios, both square in size and with low ceilings. In addition, all teams invested a lot of special design and engineering resources, all while navigating through scheduling issues due to the COVID-19 pandemic.

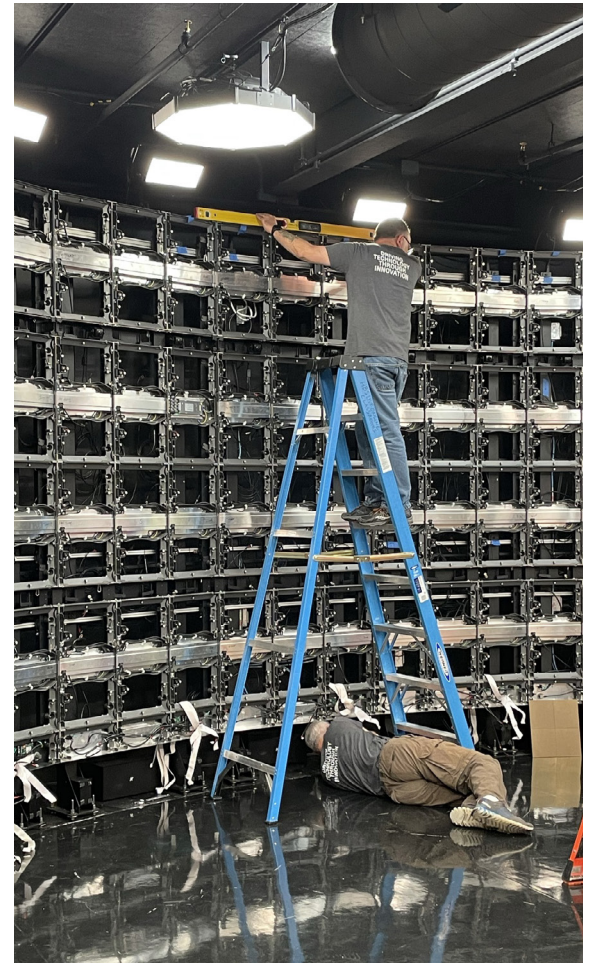
The University chose McCann Systems, an audio visual design build integrator, to design and manage the project. Specifically, two identical, 57-foot, 96-person concave video walls, based on a similar type of video wall McCann's team had conceptualized, designed, and installed in another venue. Unilumin was chosen to provide the dvLED displays and the Peerless-AV team was chosen to design, engineer, and deliver a custom SEAMLESS Bespoke Mounting System that would bring together all of the design objectives.

The Solution

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The university selected [Proscenium](#), the connected studio environment from McCann Systems, as their solution. McCann Systems and Unilumin recognized that Peerless-AV was the only manufacturer whose mounts would work successfully for this custom installation. Peerless AV was also chosen for its long-standing relationships with McCann Systems and Unilumin.

Known for its flexibility, cost effectiveness and superior customer service, [SEAMLESS by Peerless-AV](#), the company's dvLED Video Wall Integration Program, ensures start to finish project support – from the design/manufacturing of custom Bespoke Series Mounting Systems to on-site installation support. No matter how complex the installation, the entire Peerless-AV Solutions Team is available every step of the way.



SEAMLESS BESPOKE

PROSCENIUM

 McCANN SYSTEMS

The Solution

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For the project, Peerless-AV custom-designed two 180-degree, 33' wide by 10' high (10m x 3m) pedestal mounting structures that are freestanding and bolted to the floor. The mounting systems needed to accommodate 168 Unilumin Upanels 1.5 displays (610 x 343mm). The final configuration of both walls would incorporate 12 bottom row half height displays (36 modules) and 2 custom displays (8 modules) with a total pixel count of 14,839,799.

“ Peerless-AV is an industry leader for a reason, and a great partner for McCann Systems. Custom work requires ad hoc responses, and our teams stepped up to deliver a groundbreaking design. From start to finish, all immediate needs were swiftly taken care of. Engineering teams worked well together on custom plates and the result is precisely seamed, simply beautiful dvLED video walls. ”

**Joseph Fusaro, VP - Senior Sales Executive
McCann Systems**



Construction of the classrooms took place throughout 2019 and, in early 2020, Peerless-AV was on site for the installation of the video walls; from the moment the teams arrived on site, they required extreme attention to detail for such a precision engineered installation. Since there was no way to attach to the walls, a pedestal mounting structure would be designed to provide a stable floor standing solution.

Each of the rooms presented additional unique challenges due to room limitations. The first studio room included stairs, an ADA ramp, and a raised walkway to allow for maintenance access. Additionally, the classroom entry opens to the rear of the video wall, so Peerless-AV added aluminum cladding on the rear of the mounting structure to conceal the electrical components and create a sleek, finished appearance. The second studio room was not the same size as the first, so Peerless-AV had to design this video wall structure differently from the video wall in Studio 1 to fit the space accordingly and create access for maintenance behind the video wall.

In addition to the custom dvLED video wall mounting systems, Peerless-AV also designed and manufactured hardware for the integrated technology solutions needed for the video walls. This included custom mounts for the four integrated web cameras in each section, (providing 56 total viewing angles), two speakers on each camera, and seven subwoofers at the base of every wall section. Six PTZ 4K web cameras were also installed.

The Covid-19 pandemic delayed the installation, and all parties were back on site to complete in the summer of 2021. The precision engineering and tight manufacturing tolerances along with x, y, z adjustment on Peerless-AV's mounting structure was essential to ensure all the Unilumin displays showed no visible lines between the panels, and to achieve perfectly flat planes at all angles of the curve on both video walls.

The Results

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The university was thrilled with the outcome of both video wall installations, allowing them to create their ideal environment for virtual classes comprised of more than 90 students in a single session. The professors can now conduct lectures as if they are in a TV studio with a control room. Each student's image is separated on the curved dvLED video wall in front of the professor, allowing for a more personal connection with students than traditional lectures conducted in a typical conferencing service.

Through Unilumin and McCann Systems' partnership with Peerless-AV, the world-renowned university created a high-tech classroom environment for those tuning in virtually. Amongst the newly implemented technology was a connected studio environment called the "Proscenium" by McCann Systems, which offers a browser-based user interface that is controlled by operators in a studio control room. This connects callers/students with a presenter and the presenter can control the video wall themselves to ask individuals questions or send a poll using the polling tool. Callers can put their hands up to speak or ask questions - the result is greater engagement and a better experience for all.

In conjunction with McCann Systems and Unilumin, Peerless-AV is proud to have created effective e-learning solutions for classroom environments of the future.

With over 80 years of audio visual experience, our commitment to the creation of cutting-edge technology and standard-setting solutions has elevated us to the status of the industry's most innovative leader. Our Dedicated SEAMLESS dvLED Solutions Team sets the bar for high quality design, while achieving the pinnacle of aesthetic results. Our dynamic group of dvLED professionals include structural and mechanical engineers, product managers, project managers, installers, as well as sales and service personnel. The entire Peerless-AV® dvLED Solutions Team is there every step of the way to ensure every customer receives SEAMLESS product support & service.



EXPERT ENGINEERING & DESIGN

Our experienced custom engineers & support staff work in a think-tank style environment, creating new & effective solutions specific to your needs.



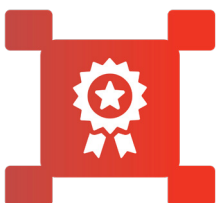
CUSTOM PROJECT MANAGERS

We provide a single point of contact, from the SEAMLESS dvLED Solutions Team, who oversees the project every step of the way, ensuring an ideal solution & timely delivery of your custom dvLED video wall solution.



FULL INSTALLATION SERVICES

When we say that we are there every step of the way, we mean it. Our SEAMLESS dvLED Solutions Team supports the installation, maintenance, troubleshooting & even, post-installation services.



SEAMLESS dvLED MOUNTING SYSTEMS

Our SEAMLESS dvLED Solutions Team exceeds industry standards, while achieving the pinnacle of aesthetic results. Choose between our Kitted and Bespoke Series dvLED Mounting Systems.

To learn more about the SEAMLESS by Peerless-AV® dvLED Video Wall Integration Program & mounting solutions, visit peerless-av.com/SEAMLESS.

About McCann Systems

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[McCann Systems](#), founded in 1996, was established to design, integrate, and elevate innovative audiovisual technologies and communications solutions for companies worldwide. In-house AVIXA CTS experts create a strong national footprint with a global reach, spanning North America with regional design and service offices. Connect with us on [LinkedIn](#), [Twitter](#), [Facebook](#), and [Instagram](#).




Unilumin Group Co., Ltd. was founded in 2004 and is a leading manufacturer of LED display products. Unilumin has 5,000+ employees worldwide, with a 290,000+ sq. m. production base equipped with advanced automatic assembly lines. We have state-of-the-art technology centers in NYC and FL to experience the vivid color Unilumin LED panels possess, in varying pixel pitches. Our 36,000+ sq. ft. Orlando Florida facility features our service repair center and our “Experience Center” showroom, for all your product viewing needs. Unilumin leads the LED products category with constant new product development and advanced manufacturing techniques.




For more information, visit www.unilumin-usa.com.

The logo for Unilumin is displayed in a bold, italicized blue font. The letter 'i' in 'Unilumin' has a green dot, and the letter 'i' in 'min' has a red dot.

For over 80 years, passion and innovation continue to drive Peerless-AV® forward. We proudly design and manufacture the highest quality products, including outdoor displays and TVs, dvLED and LCD video wall systems, complete integrated kiosks, professional carts and stands, and more. Whether a full-scale global deployment or high volume custom project, Peerless-AV develops meaningful relationships and delivers world-class service. In partnership with Peerless-AV, you are trusting an award-winning team of experts who will support your business every step of the way. For more information, visit peerless-av.com.



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