

Case Study

CJ ENM's Virtual Production Stage

Samsung The Wall leads innovation in virtual production industry with Micro LED technology

Overview

CJ ENM is committed to creating best-in-class content by embracing the next generation of video production technology to satisfy a range of audiences and film makers in the increasingly fast-paced world of entertainment. In partnership with Samsung, two sets of The Wall were installed to build CJ ENM's Virtual Production Stage, the world's largest virtual studio based on Micro LED technology. The cutting edge display and Samsung's proprietary picture quality technology, developed over past decades, enables CJ ENM to create a highly efficient, modernized virtual studio that can be utilized across multiple projects ranging from movies and dramas to entertainment and music.

About CJ ENM and Virtual Production Stage

CJ ENM is a leading entertainment company originated from Korea. Since 1995, the company has engaged in a wide array of businesses across the industry spectrum, including media content, music, film, performing arts and animation, providing its top-notch, original content to various media platforms. CJ ENM has created, produced and distributed globally acclaimed content including the Oscar-winning film Parasite, Tony Award-winning musical Kinky Boots, record-breaking Korean box office hit Roaring Currents and sought-after television series such as Mr. Sunshine. The Virtual Production Stage is the world's largest virtual studio with Samsung's Micro LED technology, which opened in May 2022.

Customer Needs

As a leading entertainment company producing award-winning films and video content, CJ ENM is constantly defining the future of entertainment. To continue innovating and immersing viewers, CJ ENM required the latest technology which optimizes both the filming process and the quality of the final result. Virtual production, which has recently been expanding in use thanks to advances in display technology, was a solution that met CJ ENM's needs. It greatly reduces the need to travel and film at on-site locations where shooting can be difficult or takes time. CJ ENM understood the importance of implementing a high-quality, efficient solution that would be easy to install, customize and maintain while enabling the production of next generation content.



Why Samsung?

CJ ENM focuses on not only delivering premium original content to a global audience, but also enhancing the infrastructure to increase production efficiency and content quality. With the most advanced Micro LED display technology in the market and a history of deep trust working together, Samsung was the perfect partner for CJ ENM to bring the next generation of content to life in a way never seen before.

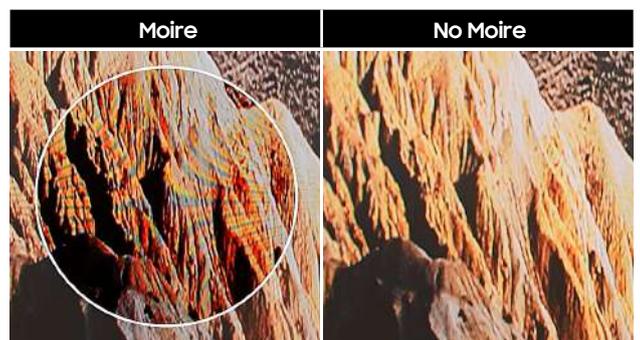
Unrivalled picture quality based on Micro LED technology

CJ ENM was looking to build a virtual production studio with the best-in-class picture quality as part of their vision to launch the most advanced one-stop production facility in Korea and strengthen its content production. Samsung's The Wall has been evolving in terms of picture quality since its introduction in 2018, which has resulted in greater quality than computer graphics so actors and directors can look at real images while working. Today, The Wall has unrivalled picture quality when compared to other LED screens, especially with its superior color reproduction. The Wall showcases the deepest blacks and represents colors as they were originally intended, making images look and feel real, and satisfying over 99% of DCI-P3, the studio industry standard.*

* DCI-P3 (Digital Cinema Initiatives P3): A color gamut set by Digital Cinema Initiatives, LLC., which is 25% wider than sRGB.
 * 99% of DCI-P3 was internally measured by Samsung.

Highest specification for industry requirement

In addition to enhanced picture quality, The Wall allows for rapid camera work and close-range shooting. The pixel pitch is short, meaning the density of pixels is high, making it more advantageous to shoot closely to the back wall compared with other LED screens. The Wall's product innovation makes filming more efficient by easily reducing flickering and moiré during shooting, common challenges in the film industry today. The Wall's diode refresh rate is 7,680hz, the highest in the industry, making it easy to adjust the refresh rate of cameras to avoid interference between screen frequency and camera frequency. Through multiple camera tests, The Wall was able to significantly shorten this process.



Convenience installation and maintenance

IWA, one of the latest additions to The Wall line-up is easier to install and customize for a variety of spaces with multiple design options, including L-type, curved and ceiling options. Samsung tailored the technology to the needs of CJ ENM by installing two sets of the wall in their studio, a circular model with a diameter of 20m and a straight model with a length of 20m. Maintenance is also improved due to the molded surface of The Wall's screen, which makes it easier to wipe off dust, a task that is typically difficult for film crews.

"Compared to other LEDs, The Wall not only has better picture quality but also allows rapid camera work and shooting at close range without any problem. So, we have great freedom in virtual production and are very satisfied with The Wall."

- Sangyeop Kim, VP, Head of Content R&D Center, CJ ENM

Technical support

Last but not least, Samsung's professional technical support team helped with every stage of the process from design to deployment. The team brought to the customer's environment invaluable professional knowledge and a collaborative attitude to ensure smooth planning, installation and functionality. Samsung's team of technical experts was able to confidently support the CJ ENM team at every step, allowing everyone to remain focused on delivering the best possible virtual production experience.

Offering

- **The Wall (IWA)** Main wall: 20m in diameter x 7m in height
Straight wall: 20m in length x 4m in height
- **Indoor LED (IFR)** Ceiling: 24m x 38m (irregular type)
- **S-Box**

Result

By implementing custom Micro LED technology that is easy to maintain with features that improve both production quality and efficiency, CJ ENM has created a virtual studio that is advancing the future of entertainment to meet consumer demand. With best-in-class technology and expert support, Samsung played an integral role in bringing CJ ENM's video production to the next level.

About Samsung Electronics Co., Ltd.

Samsung inspires the world and shapes the future with transformative ideas and technologies. The company is redefining the worlds of TVs, smartphones, wearable devices, tablets, digital appliances, network systems, and memory, system LSI, foundry and LED solutions. For more information about Samsung Smart Signage, please visit www.samsung.com or www.samsung.com/displaysolutions.