Second Story's generative media artwork, Unify. Photo credit: Second Story

Extron Quantum Ultra Drives Immersive Artwork Videowall at Charlotte's Legacy Union Tower

"We were impressed with the performance of the Quantum Ultra 610 and Extron's technical expertise and on-site support in handling changes and last-minute requests."

Frank Milesky
Southeast Area Director
Cenero

Challenges

The new landmark Lincoln Harris Legacy Union Tower commercial-use space in Charlotte, North Carolina required an eye-catching display system. The vision was to entertain and inform visitors while providing tenants with a unique advertising platform. The elegant lobby within the 33-story, 850,000-square foot (78,968-square meter) Legacy Union Tower would feature a three-story tall videowall. Content would reflect city-centric art and history united with concepts and ideals representing the future of Charlotte.

The system had to support 4K/60 video and presentation of a single source over the entire canvas. Additional requirements included flexible windowing, seamless switching, and system automation, regardless of window number and arrangement.

Quantum Ultra Empowers a Videowall of Awe-Inspiring Art, History, and Innovation

Integration firm Cenero outfitted the tower's lobby with a NanoLumens® 4 mm direct view LED videowall measuring 36' tall by 64' wide. Sources include 16 cable tuners and a Seneca® PC powering the Unify artwork produced by Second Story. Periodically, this company transfers new content to the PC. The system supports any arrangement of up to 16 simultaneous

Cenero outfitted the vast lobby with a NanoLumens 4 mm direct view LED videowall measuring 36' x 64', which is driven by an Exron Quantum Ultra 610 4K Videowall Processor. By default, custom content produced by Second Story fills the entire canvas. Pictured: Second Story's generative media artwork, Unify. Photo credit: Second Story

Even under close examination, the video content is without pixilation or loss of critical image detail. Pictured: Second Story's generative media artwork, Unify. Photo credit: Second Story

The 10-card slot frame of the Quantum Ultra videowall processor is configured with seven IN4HDMI input cards for connection of the 17 sources and two OUT4HDMI output cards to support the 4K videowall.

sources, with an optional additional source as background to the rest. The PC is the default source, filling the canvas with one 4K/60 video image.

Cenero and NanoLumens evaluated products that claimed flawless presentation. After extensive testing at the Nanolumens lab, they mutually agreed on the Extron® Quantum Ultra 610 4K Videowall Processor.

Two factors leading to selection of the Quantum® Ultra were its capability to support the videowall's native resolution of 4096x2304 and a modular architecture that allowed the configuration to match the design specs. These and the processor's many capabilities made it the right choice. A few other features include a 400 Gbps HyperLane® video bus, frame-locked outputs, output overlap, and adjustable mullion compensation. Also, an embedded operating system that resides on a write-protected, solid-state storage drive and redundant, hot-swappable power supplies ensured reliable operation.

The videowall processor's 10-card slot frame is configured with seven IN4HDMI input cards and two OUT4HDMI output cards. The 16 cable tuners are directly connected to HDMI inputs. For the Seneca PC, an Extron DSC HD-HD 4K PLUS A xi HDMI-to-HDMI 4K/60 scaler converts video from single path to dual-path 4K/60 to feed into the videowall processor. The scaler also de-embeds audio and sends it to the house sound system.

The Quantum Ultra upscales the source content to match the native 4096x2304 resolution of the videowall. Four outputs feed the Nanolumens LED controller with 2048x1152 / 60 Hz signals. Custom output timing rates and EDID were loaded to the processor to support this unique resolution. The 400 Gbps HyperLane video bus easily accommodates the high bandwidth demands, displaying content from the 17 sources without pixilation or loss of critical image detail.

Cenero loaded a comprehensive set of window configuration presets, facilitating ease of use and automated operation during business hours. Also, the support staff can monitor and manage the videowall remotely.

Results

Many tenants asked to advertise on this 36' x 64' videowall that artistically reflects Charlotte's past, present, and future. No other high rises in the city had anything similar. The building was majority leased well before its grand opening, and the sheer size of the installation continues to be a key space selling point. This high degree of tenancy is attributed in part to the massive videowall driven by the Quantum Ultra 4K Videowall Processor.