Extron's Quantum Ultra Modular 4K Videowall Processor

Written by Roger Douglas
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Extron Electronics introduces **the Quantum Ultra, a modular 4K videowall processor** with high-performance scaling and windowing technology for a wide range of applications.

The Quantum Ultra features the **Extron Vector 4K 4:4:4 scaling engine** and **400 Gbps HyperLane video bus**
capable of carrying a multitude of high-resolution sources. A single processor can support multiple videowalls with mixed resolutions and screen orientations, providing flexible system design with minimal complexity and cost.

Customizable output resolutions, output overlap, and mullion compensation provide compatibility with nearly any display technology. RS-232 and Ethernet interfaces provide direct connections for control systems.

"We're responding to the growing demand for 4K videowall solutions in mission critical AV environments," says Casey Hall, VP Sales and Marketing for Extron. "With Extron HyperLane bus technology, powerful processing features, and robust, secure operation, the Quantum Ultra delivers dependable, real-time performance unmatched by other videowall processors."

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Quantum Ultra utilizes a modular card-frame architecture that can be populated with input and output cards selected to match source and display requirements. Multiple card frames can be configured and operated as a single system to accommodate any size videowall.

Quantum Ultra can accommodate a mixture of display devices with varying resolutions. Features such as output overlap, mullion compensation, output rotation, and custom output resolutions provide compatibility with current and future display devices.

Their future-ready HyperLane bus delivers real-time performance unattainable by other videowall processors, says Extron. It has a maximum throughput of 400 Gbps, sufficient to simultaneously carry more than twenty 4K/60 sources with 4:4:4 chroma sampling. It also possesses the bandwidth required to support evolving signal formats, such as 8K, and the higher resolutions, high dynamic range - HDR, greater color depth, and expanded color gamut these signals will provide.

Sources can be windowed and positioned anywhere on the video display. Static image files such as logos and maps can be stored locally on the Quantum Ultra, and displayed with full keying and alpha channel support. Internally generated clocks can be presented in a variety of time formats, in multiple time zones. The integrated VNC client can decode multiple simultaneous VNC server streams for presentation on the videowall. Custom color borders can be applied to any window, with support for rounded corners, drop shadows, flashing, and transparency.

Quantum Ultra was engineered for continuous operation in mission-critical environments. Redundant, hot swappable power supplies, dual IEC power connections, a write-protected, solid-state operating system drive, and secure communication protocols, ensure system redundancy, security, and stability.

Quantum Ultra setup and preset configuration are performed using **Extron VCS - Videowall Configuration Software** .
System configuration is broken down into logical tasks, such as wall configuration, source setup, preset design, and EDID Minder for simplified integration. Online and offline editing allows creation and configuration of systems with or without an attached processor. Familiar editing controls streamline layering, aligning, and sizing of source windows. Live and Preview modes provide the option for immediate or controlled wall response to edits. With an intuitive

workflow and familiar interface, VCS provides efficient configuration of any Extron 4K videowall processor.

This intuitive application simplifies configuration of even the largest and most complex systems. Settings and preset changes within the software are automatically synchronized and stored on the videowall processor, facilitating direct RS-232 or Ethernet connection of remote control systems to the Quantum Ultra card frame.

Go The Quantum Ultra

Watch Quantum Ultra, the Product Introduction Video