



Photo courtesy of Suzlon Energy Ltd.

Extron Quantum Elite Helps Suzlon Energy's Monitoring Center Operate 8,700+ Wind Turbines Across India

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Mr. Vinay Gupta
Head, Data Analytics and Business Excellence
Suzlon Energy Ltd. Pune, India

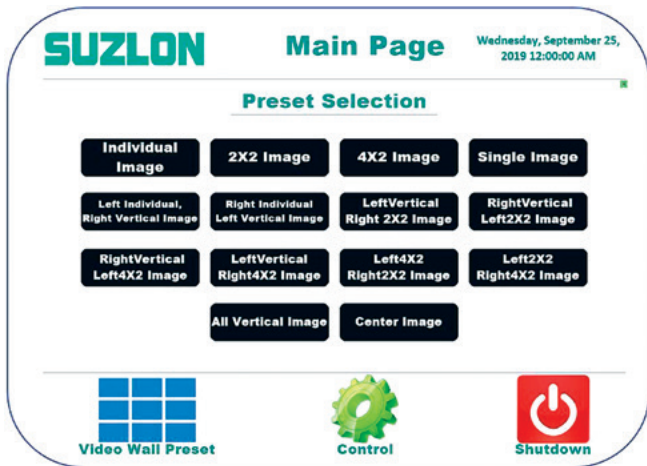
Challenge

Suzlon Group, headquartered in Pune, India, is a leading worldwide supplier of solar and wind renewable energy. Its Suzlon Energy Ltd. subsidiary recently installed a videowall at its Pune Monitoring Center to provide operational supervision for 8,700+ wind turbines across India, which represents 35% of the country's wind installations.

System integrator Genesis IT Innovations Ltd., Bangalore, India was commissioned to supply the videowall system. They turned to Extron for video processing and control systems that satisfied Suzlon's requirement to present large volumes of information in an organized manner. Each turbine has 300 sensors continuously sending data to the Monitoring Center. The videowall's 8 x 2 array of 55" displays supports high resolution video from operator PCs, enabling personnel to get a clear big picture view of wind turbine fleet status. Detailed telemetry is displayed along with other pertinent video feeds in a variety of source window layouts delivered by an Extron Quantum Elite Videowall Processor.



The Quantum Elite videowall processing system provides Suzlon's Pune Monitoring Center with a cost-effective, reliable way to create a videowall that accepts HDMI sources and displays highly detailed images.



Users select videowall window presets wirelessly from an iPad via a customized graphical user interface. The GUI was created using Extron's free GUI Designer software. Photo courtesy of Genesis IT Innovations Ltd.

Solution

The videowall clearly reproduces high resolution content, allowing operators to read detailed graphics from a distance. This is a benefit of the high performance video scaling and 4:4:4 color sampling that preserves original image quality at all window sizes. A dedicated video bus allows simultaneous processing of numerous signals while maintaining real-time performance with optimal image quality at full frame rates.

Failsafe Reliability

The videowall must support 24/7 – 365 operations. Quantum Elite is designed for continuous failsafe service. It features redundant, hot swappable power supplies and fans. Write protected, CompactFlash-based data storage for the operating system eliminates risks of virus retention or hard drive failures.

Fast, Easy Preset Selection Through Intuitive iPad-Hosted GUI

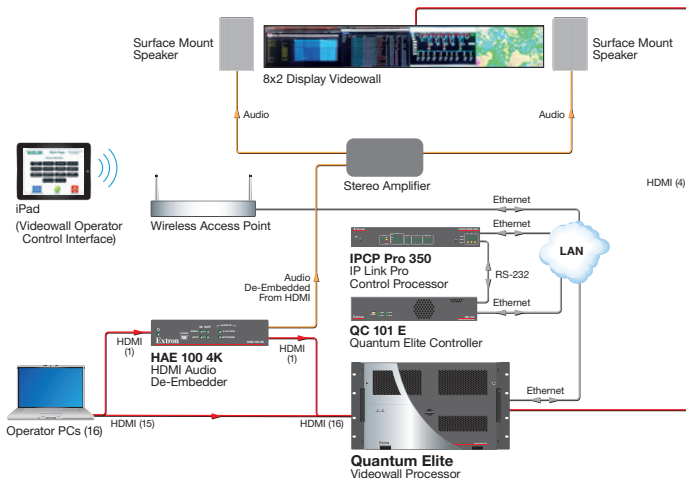
Operators rely on the videowall display for timely, accurate information to manage, troubleshoot, and track performance of the wind turbine fleet. To ensure that visual data is consistently displayed at correct locations on the videowall, preconfigured window presets are recalled using a customized graphical user interface on a WiFi-connected iPad. An IPCP Pro 350 IP Link® Pro Control Processor with LinkLicense for User Interfaces manages overall system operations. The primary system control interface is an iPad running the Extron Control App.

Efficient Output Management Simplifies Installation

The Quantum Elite has 16 HDMI inputs connected to operator PCs and four HDMI outputs feeding the videowall. According to Genesis regional manager Ashwin Deshmukh, "By looping each HDMI output from Quantum Elite through four displays, cost, complexity, and installation time were reduced, while Quantum's windowing capability gave us complete videowall versatility."

Result

Mr. Vinay Gupta, Suzlon's Data Analytics and Business Excellence Head states, "Extron's Quantum Elite videowall processor and control systems installed at the Suzlon Monitoring Center enable simultaneous display of live video, maps, and data from wind turbine monitoring applications, with customizable layouts. This has greatly improved visualization and team member interaction, resulting in improved productivity."



16 operator PCs connect to the Quantum Elite Videowall Processor HDMI inputs. Each of the four HDMI outputs are looped across four 55" displays to drive the 16-display videowall. Operators select window presets from a WiFi-connected iPad. Wall mount speakers provide audio from one PC. Videowall photo courtesy of Genesis IT Innovations Ltd.

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