



## Products

Clarity Matrix Video Wall

## Location

Chattanooga, TN

## Industry

Electric Utility

## Application

Control Room

CLARITY MATRIX VIDEO WALL IS KEY TO EFFICIENCY OF DEMANDING CONTROL ROOM

# Electric Power Board (EPB)

EPB (Electric Power Board) is the municipal utility for Hamilton County, Tennessee. It takes power generated by the Tennessee Valley Authority (TVA) and provides it to 170,000 residential, commercial, government and industrial customers, making EPB one of the largest publicly-owned power distributors in the country. Its state-of-the-art EPB Control Center in Chattanooga is the hub of a 100 percent fiber optic network, which delivers electricity and also feeds two large Planar video walls that operators use to keep constant tabs on every aspect of the electrical grid and ensure that customers receive reliable, cost-effective power.

*“With the Clarity Matrix video walls, we can see so much more of our network and how it is performing.”*

*- Jason Read,  
Senior Engineer, EPB*

In collaboration with the systems integration firm, Whitlock, EPB selected the 55-inch Clarity™ Matrix Video Wall with G2 Architecture (MX55H DU) for the control center. The primary video wall is a ten-wide-by-four-high (10x4) array of displays which depict all required operational information. A four-wide-by-three-high (4x3) video wall, installed perpendicularly to the primary video wall, depicts any additional information that operators or managers need to monitor and manage the network.

“Our fiber optic network lets us gather much more information than was possible in the past. With the Clarity Matrix video walls we can see and present all of it and more such that we are more knowledgeable of how the network is performing and can do the best job possible managing it,” says Jason Read, Senior Engineer for EPB. “The functionality of Clarity Matrix is not likely to be found on any other such video wall on the market today.”

## Video wall processor delivers numerous benefits

A critical element of Clarity Matrix with G2 Architecture is its use of the Clarity™ VCS, a flexible and easy-to-use video wall processor. Clarity VCS offers a selection of capture cards to capture and display a wide range of visual sources. These include high resolution DVI, HDMI, component HD, analog RGB, Dual Link DVI and SDI (SD, HD, 3G) inputs, as well as standard definition video in composite and S-video formats. Clarity VCS is especially good at displaying SCADA applications whose data comprises every operational aspect of EPB’s network. It allows the smallest data point — and there are more than 2,000 of them in this network - to be displayed on a portion or all of a single Clarity Matrix display, or scaled up to fill the entire 40-unit video wall in 1080p resolution. This gives a single operator or the entire control team quick, clear, instantaneous visibility to any point in the network where there could be a problem. As a result potential outages, or issues with voltage or current consumption can be avoided and efficiency parameters can be maintained at optimal levels for any and all customers.

EPB’s Read adds that Clarity VCS greatly improves operator productivity. “Because we can scale any piece of information up to the full wall, operators don’t have to spend time searching for or drilling down to understand the location or reason for a problem or potential problem. In seconds or minutes, they can see an issue before it causes a failure or outage and take action to mitigate it much more quickly.”

# Clarity Matrix is easily installed, flexible and easy to use

Other key aspects of Clarity Matrix Video Wall include its ease of installation, its ultra-slim profile and its off-board electronics design. Installation is facilitated by Planar's EasyAxis™ Mounting System, a six-axis cam mechanism that allows for precise positioning of all displays in a video wall. The EasyAxis Mounting System also provides convenient front and rear access and allows individual displays to be replaced without the entire video wall having to be dismantled in the event of a single-display failure. The mounting system also capitalizes on Clarity Matrix's ultra-slim bezel (5.5 mm), allowing displays to be installed in the two-degree curve EPB desired for the main video wall. Whitlock created the curved array – which makes easy viewing possible regardless of where an operating is sitting – and the slim bezels ensured that we'd get access to any display with no danger that an adjacent one would bind against it in the event of the need for service or maintenance access.

Clarity Matrix with G2 Architecture offered EPB Planar's pioneering off-board electronics design, which allows certain components to be housed away from the video wall, in a remote rack room for example. This engineering design offers several benefits including an up to 25 percent reduction in heat generated by the video wall. "This eliminated the need for additional air conditioning to cool the wall, which significantly lowers operating costs relative to other video walls," EPB's Read says. "And another benefit we didn't expect was that by enabling the video wall to run cooler, components are not as prone to heat failure, which adds to the life cycle of the video wall as a whole."

Lastly, both EPB and Whitlock like both the connectivity and the image quality of Clarity Matrix. The utility is able to display a wide variety of information from sensors and internal computer feeds – everything from any of the thousands of network sensors that have been implemented to weather broadcasts from weather channels. Image quality is top notch, reflected in every Clarity Matrix MX55HDS display's 800-nit brightness, Full HD resolution and 10-bit color processing. "With an image of this quality, we can easily see everything from the status of an individual electric meter, to a transformer to, to the exact location of an approaching thunderstorm cell. All in all, Clarity Matrix Video Wall with G2 Architecture is a perfect visualization and management solution for a demanding control center like ours," Read adds.



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