PLANAR | Installation Profile



Products
Clarity Matrix Video Wall

Location
Huntsville, Alabama

Industry
Space Exploration and Research

Application
Mission Control

CLARITY MATRIX VIDEO WALL IS CENTRAL TO SPACE STATION SCIENCE PROGRAM

NASA Payload Operations Integration Center

Planar's Clarity™ Matrix LCD Video Wall System is widely recognized as a highly effective solution for control center environments. Among the most demanding of these is NASA's Payload Operations Integration Center (POIC) at the Marshall Space Flight Center in Huntsville, Alabama, where a Clarity Matrix Video Wall is integral to the monitoring and management of science being conducted on the International Space Station (ISS).

The Payload Operations Integration Center has been operational since 2001 and, during that time, flight control and other center personnel have monitored and managed ISS mission progress using a mix of large-scale computer monitors and a complement of large scale projection screens to

view ISS activities and share information as needed. In the newly renovated POIC, a video wall of nearly two dozen Clarity Matrix MX55HD displays has been installed in front of and above the flight control positions. Operational since mid-2013, the Clarity Matrix Video Wall provides capabilities that enhance collaboration among the ground team and enable them to more efficiently help the ISS crew, and researchers around the world, perform cutting-edge science in the unique space environment.

Features that directly support ISS mission objectives

A key feature of the Clarity Matrix Video Wall is its ability to display a variety of content, including live video, still photography, graphics and text. Examples include photos of ISS experiments, scientific data acquisition and other important information such as power usage on the station at any particular time. The video wall instantly allows this information to be shared among the full team, a capability that is significant considering more than 200 experiments are being conducted at any time. And since the Clarity Matrix can be relied on for flawless operation 24/7, 365 days a year, it has allowed ground controllers and scientists to monitor and control experiments remotely during ISS crew sleeping hours, thus ensuring that critical experiments have the power, data recording and transmission needed for successful, uninterrupted operation.

POIC wall meets productivity, collaboration and performance requirements

A number of technical attributes of Clarity Matrix allow it to play the role that it does in the POIC. To begin with, Clarity Matrix delivers what Planar believes is the gold standard in image quality. As an example, Clarity Matrix has an ultra-slim tiled bezel width of just 5.5mm that gives the POIC ground team a nearly 225 square-foot visual field that is nearly seamless, thus ensuring that virtually any piece of data can be easily seen. Further, every Clarity Matrix display in the video wall operates at 800-nits brightness, Full HD resolution and 3500:1 contrast ratio, delivering – essentially – cinematic-level high definition quality. Also, every display is capable of handling 16 million colors, thus guaranteeing that even the most nuanced visual data associated with any ISS experiment is clearly visible on any controller's assigned screen set or when expanded to the full video wall for sharing among the full ground team.

Clarity Matrix also has important reliability and serviceability features. Included among these are the display's 50,000-hour backlight life and redundancy/auto-fail over in a number of key components. Thus, NASA is assured that the video wall will operate virtually uninterrupted such that there is no disruption to monitoring, control or ground-team involvement in ISS experiments.

But even with Clarity Matrix's proven performance track record, there is always the possibility of a display problem or failure. To ensure the customer is not seriously impacted by such an occurrence, Planar engineered Clarity Matrix to install on its unique built-in EasyAxis™ Mounting System. This six-way cam adjustment system first ensures that all displays can be aligned quickly and precisely. Second, EasyAxis has a tilt-out feature that enables any display to be tilted out and up so that technicians can gain access to any other display needing service. Unlike any other mounting system on the market today, EasyAxis is another example of the performance assurance that Planar has engineered into Clarity Matrix.

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