

TECH BRIEF

LCD video walls The advantages of remote power

Traditionally, the electronics board, power supply, fans, cabling and mounting chassis of professional-grade LCD panels are attached directly to the LCD module assembly. Christie® developed an alternative solution that replaces the on-board power supply with circuitry that can connect to an enclosed, remote power supply.

As a result, the remote power supply of a multi-panel array—such as an LCD video wall—can be located up to 300 ft. (90m) away. Remote power provides several advantages, from time and cost savings during installation and ongoing service, to the performance and lifetime of the display.

Installation ease

How does a remote power supply save time and cost during installation?

Low voltage cabling is used between the LCD panel and remote power module. Since the power module can be located up to 300 ft. (90m) away from the LCD panel, installers have greater access to AC power outlets, no matter their location. This can be a big cost-saver for installations where it's difficult to run AC power.

Also, a single remote power module can drive between 4-6 displays, resulting in fewer points of failure.

Finally, fewer outlets are required, which in turn reduces both the overall cost of installation as well as how long it takes.



^ Montgomery County EOC

Redundancy can reduce or eliminate downtime

The remote power supply chassis can also be populated with an additional power module, which adds N+1 redundancy to the video wall.

In the case of a failure, the wall remains operational, with zero downtime. You can then replace the failed remote power module later, at a more convenient time.

Service accessibility

Power supplies have a higher probability of failure due to unforeseen events like storms or brown-out power surges. When a remote power system is used, a failed power supply module can be quickly replaced within a matter of minutes.

Comparatively, replacing an on-board power module requires the LCD panel to be removed from the video wall and either replaced with an entirely new panel, or serviced to replace the power supply. Next, the panel needs to be reinstalled and re-aligned.

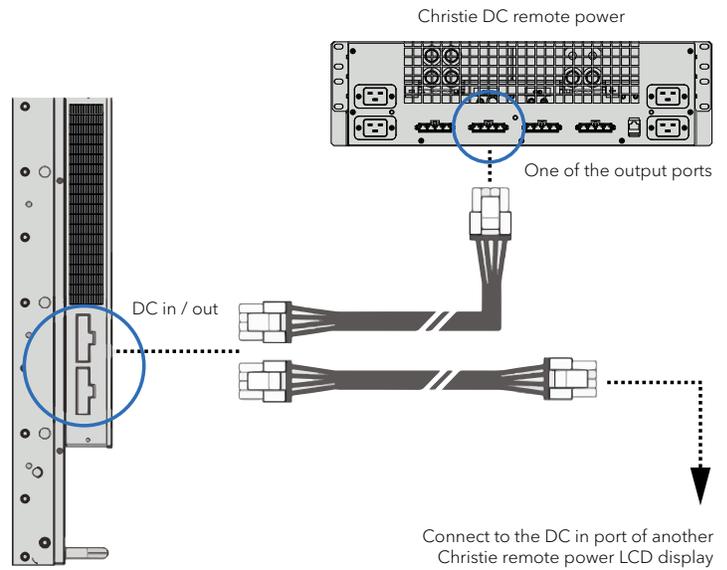
Not only does all of this take significantly more time, lifts or ladders may even be required to access and replace the panel. All of this additional handling increases the risk of damaging the LCD display.

Reduced thermal load for improved lifetime and image quality

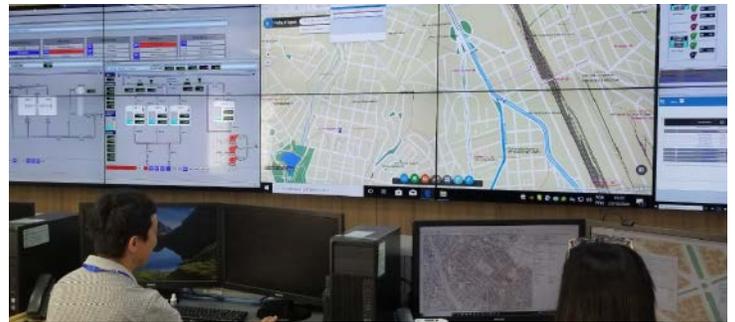
Another aspect that helps improve the overall performance and lifetime? Reduced thermal load. Placing the power supply away from the display eliminates approximately 10-15% of the heat load that is normally generated and disbursed at the display.

Advantages of reduced thermal load

- › Less heat needs to be accounted for in the display area
- › Image quality is improved due to the absence of image artifacts
- › LCD components experience longer lifetimes because the LCD module experiences less thermal stress



^ This diagram illustrates a typical approach for a remote power LCD video wall



^ São Paulo water management company equips its control rooms with 144 Christie LCD video wall panels

Have any questions?

At first glance, a remote power module may appear to cost more than an on-board model, but the associated advantages—from service and installation to image quality and longer lifetime—can add up to a lower total cost of ownership. We're here to help.

Let's talk today!

For the most current specification information, please visit christiedigital.com

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