

Solving Space and Compliance Challenges in Medical Displays with the LPP300 Series

INDUSTRY**Patient Monitoring****SOLUTION****LPP300S24K****APPLICATION****Medical Monitor****CHALLENGE**

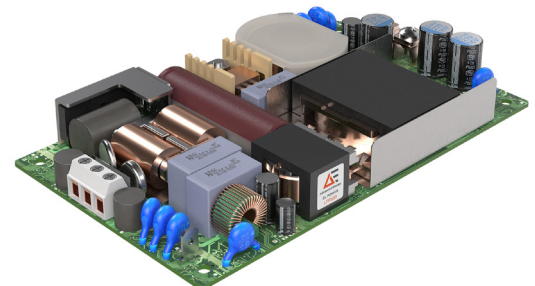
A leading medical display manufacturer initiated the development of a new generation of large screen monitors designed for surgical suites and other critical care environments in hospitals and clinics. The project strategy focused on three key objectives:

- Reducing monitor depth to minimize the footprint in space-constrained clinical settings
- Maintaining exceptional image clarity to support accurate diagnosis and surgical precision
- Ensuring patient and caregiver safety through full compliance with stringent medical device regulations

From a technical standpoint, the design required a single-output AC-DC power supply compact enough to fit within the limited space available behind the display panel while delivering sufficient power for both increasing screen sizes and the electronics critical to superior image quality.

The customer required a power solution that offered:

- 24 V at 160 W output
- Convection cooled to eliminate audible noise to a minimum contributing to positive patient and caregiver experience and protects sterile environments.
- Universal AC input to allow global use of their monitors
- High reliability & long operating life
- Trusted, well-established brand with a proven medical track record
- Reduced lead-time for initial samples and shortest development time for power supply qualification to accelerate overall system validation



SOLUTION

Advanced Energy's new LPP series of low-profile AC-DC power supplies, specifically model LPP300S24K in this case, are a perfect fit for this application.

As a standard, off-the-shelf solution, the LPP300S24K met all of the customers' requirements without the need for custom development. Key features include:

- An ultra-low 0.75 inch profile, supporting the customer's depth-reduction objectives
- 170 W convection cooled output power rating
- Fully compliant to IEC/EN/cUL60601-1 medical safety standards
- Standard off-the-shelf product readily available in the channel

RESULTS

Advanced Energy (AE) provided early access to LPP300S24K sample units, allowing the customer to validate performance early in the design phase. By selecting the SL Power LPP300 series, the device design team was able to quickly find a fully compliant, space-efficient power supply that aligned with their technical and commercial requirements.

The immediate availability of qualified samples enabled the customer to resolve power system challenges early, significantly accelerating the development timeline and supporting faster regulatory approval of the finished medical monitors.

BENEFITS

AE and the LPP300 family of products offer these benefits to critical medical device designers:

- Standard off-the-shelf low profile (0.75" height) products fully certified to medical safety standards -IEC/UL/CSA/EN60601-1, enabling reduced development time and faster time to market.
- World-class service and consulting from technical experts to help with system integration.
- Reduced lead-time for initial samples
- Willingness and ability to collaborate on future requirements

CONCLUSION

AE's LPP300 family provided an efficient, reliable solution that enabled the customer to achieve their miniaturization goals without compromising performance, safety, or development speed.

With rapid availability, proven medical compliance, and exceptional technical support, AE helped accelerate the customer's product development cycle and improve time to market. Backed by a broad portfolio of highly reliable medical power solutions, Advanced Energy is well positioned to support both high- and low-voltage requirements across a wide range of medical applications.



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