

CASE STUDY:

EMBEDDED POWER SUPPLY FOR SMART CITY INFRASTRUCTURE

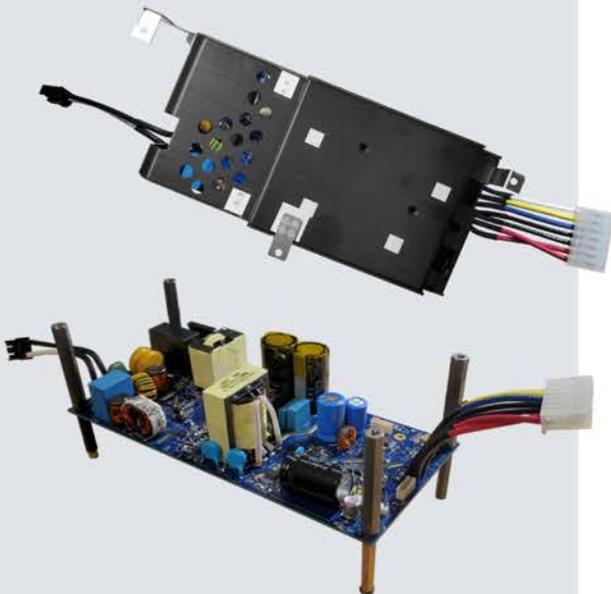
AT A GLANCE

Requirements

- ✓ Wide AC input range: 90 to 528 VAC
- ✓ Maintain power, regulation, and efficiency over the full AC range
- ✓ 24/7 continued operation over a wide temperature range
- ✓ No airflow or venting

Benefits

- ✓ Custom electrical and mechanical design
- ✓ Thermal design for wide operating temperature range in a sealed environment
- ✓ Silicon carbide technology



OVERVIEW

In the world of smart cities, streetlights have evolved into more than just a light source - they have become the backbone of a robust network that monitors the environment, improves public safety, and enhances connectivity. By integrating small cells into existing streetlights, we can unlock a world of possibilities for citizens and businesses. This innovative solution improves energy efficiency, lowers operational costs, and provides a platform for growth and progress in our communities.

POWER CHALLENGES

Smart streetlights require a versatile AC input range of 90 to 528 Vac to operate from various infrastructure power sources while maintaining steady power, regulation, and efficiency. They must also be able to withstand 24/7 continuous operation, typically in a sealed environment with a high ambient temperature of up to +80 deg C, without airflow or outside venting.

ASTRODYNE TDI'S SOLUTION

At Astrodyne TDI, we are passionate about delivering power solutions that surpass expectations. Our team of experts utilizes precision engineering and innovative technology to create solutions that can endure challenging environments. By incorporating silicon carbide technology and proprietary thermal design methodologies, we support an unusually wide AC input voltage range and extreme operating temperatures, providing our clients with the best possible performance for smart city applications. Our unwavering commitment to excellence is reflected in this exceptional achievement.