

New High-Frequency Switching Power Supply for Smart Cities



Overview

In this paper, the authors propose a scalable, broadband, dielectric lens-based mmWave energy harvester with wide total solid angular coverage and mW-level harvesting capabilities. The proposed system features a 'pixel' array of rectennas, each incorporating a circularly polarized aperture-coupled. Smart cities with the Internet of Things gained increasing popularity in recent years. It helps optimize resource allocation, improve public services, stimulate economic growth and improve the quality of life. It is reported that there are more than 250 smart city projects in over 178 cities. NWL first developed the PowerPlus™ switch mode power supply (SMPS) to provide an integrated high voltage system for electrostatic precipitator applications. ✂ By 2026, Power Will Decide How Smart a City Really Is From surveillance and traffic control to classrooms and command centers — every smart city function depends on one invisible constant: uninterrupted power. This article explores the critical role of power semiconductors in driving advancements.

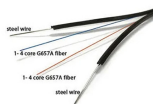
New High-Frequency Switching Power Supply for Smart Cities



Operators in urban power distribution are faced with ever increasing efficiency and supply quality requirements. To meet these demands operators need to introduce automation throughout the entire ...



The High-Frequency Switching-Mode Power Supply (HF-SMPS) market is booming, projected to reach \$25 billion by 2033, driven by renewable energy, EVs, and data centers. Explore ...



Although linear supplies can provide better regulation and better ripple rejection at low power levels than switched mode supplies, the above advantages make the SMPS the most common choice for power ...



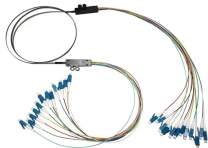
The new materials allow the devices to operate at higher voltages, temperatures and frequencies, making them ideal for high-power applications and high-frequency operation.



This groundbreaking technology, along with its platform rollout featuring both 750 V and 1200 V devices, will revolutionize power distribution and propel it into the age of semiconductor ...



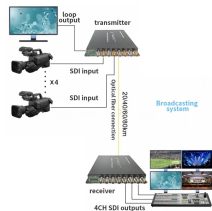
PowerPlus can now fill this void with systems up to 300kV and 1000kW, with packaging options that can withstand extreme weather conditions, and a circuit topology that can handle repeated arcing and ...



This article will explore the reasons behind this transition, the benefits and challenges of high-frequency switching (HFS) PFC, and what it means for the future of power electronics.



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