

# DIGITAL ELECTRICITY™ APPLICATION NOTE

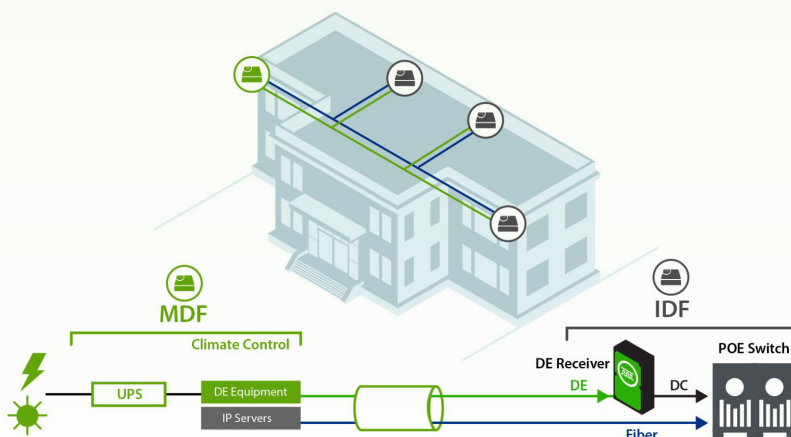
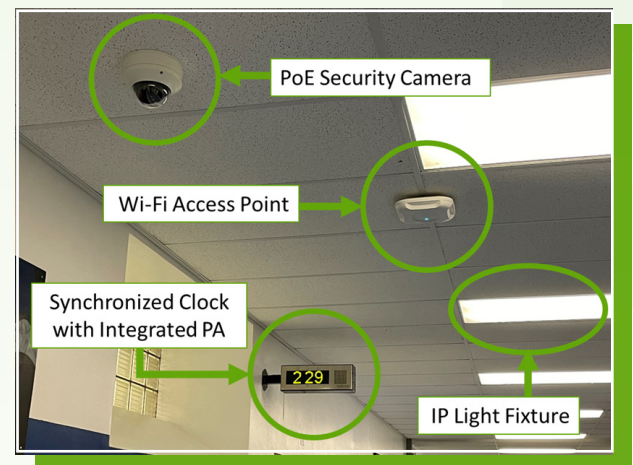
## POWERING PoE SWITCHES

### THE SCENARIO

The proliferation of the Internet of Things (IoT) brings benefits to the building of the future by reducing operating costs, increasing energy efficiency, and improving tenant safety and comfort. Edge devices span a wide range of applications from lighting to workstations to security systems.

### THE CHALLENGE

The edge devices in an intelligent building can be connected via Ethernet cable, fiber optics, or wireless. The traditional power options: local AC, power over Ethernet (PoE), and low-voltage DC (LVDC) each have drawbacks. Local AC may not be conveniently located for things like Wi-Fi access points and security cameras on the ceiling. It also requires permits, bulky conduit, and licensed electricians to install or modify. PoE and LVDC are easy and affordable to deploy but the limited power and distance does not meet the needs of many devices. For business critical applications, all 3 technologies require a local uninterruptible power supply (UPS) as a fallback during a power outage.



### WHY DIGITAL ELECTRICITY™?

- **Simplicity:** A centralized digital power architecture replaces small, distributed UPS providing a single monitoring point vs. many.
- **Cost:** Does not require new AC runs to each IDF. Power and data can be distributed in the same pathways by the same contractor.
- **Flexibility:** The power distribution can be reconfigured by IT personnel as needed.

# WHAT IS DIGITAL ELECTRICITY™ ?



Conventional Electricity



DE Transmitter

Structured Cable



DE Receiver



IoT switch

## ENERGY PACKET



Discrete “packets” of electricity.  
Each checked for safe transfer from transmitter to receiver.  
500 safety checks per second.

### SOLUTION 5S's:

- Significant Power: 600W/pair
- Significant Distance: 2km
- Skinny Conductors: 18-16AWG
- Speed to Deploy
- Safely



### DELIVERING POWER:

- Where it is needed
- In the format it is needed
- With lower cost & higher resiliency

VoltServer is the leading provider of intelligent, premise-based power distribution solutions leveraging Digital Electricity™ from centralized source to distributed endpoint loads to improve the customer's essential business applications.

Patented and proven **Digital Electricity™** solutions deliver cost-effective, high-reliability power where and when you need.

Digital Electricity™ is a trademark of VoltServer, Inc.