

# DIGITAL ELECTRICITY™ APPLICATION NOTE

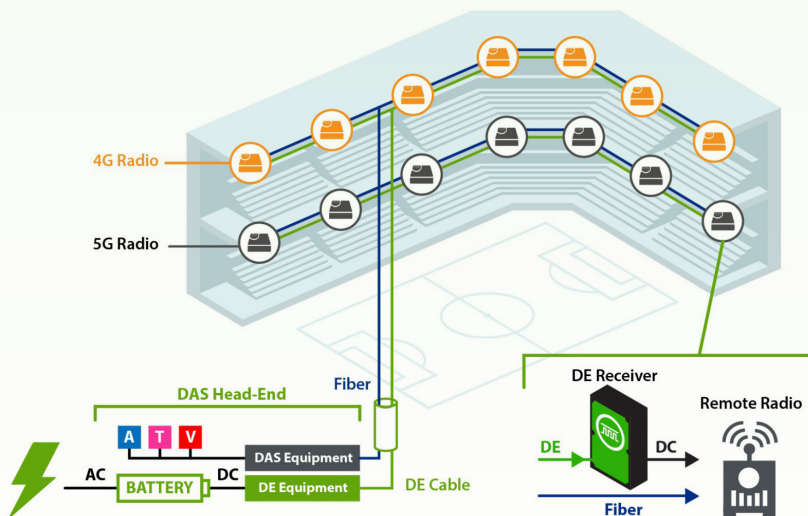
## 4G AND 5G DAS

### THE SCENARIO

High-capacity 4G and 5G is a requirement to attracting and retaining tenants in both public and private venues. Professional sports stadiums have seen exponential growth in data traffic during events, and Wi-Fi cannot keep up. Millions of mobile customers passing through airports and other passenger terminals expect ubiquitous coverage and the capacity to meet their personal and professional needs. New private networks are adopting the same technology that was historically only used by mobile network operators, so building owners can offer unique new services to tenants and guests.

### THE CHALLENGE

A distributed antenna system (DAS) can solve mobile coverage and capacity issues within buildings. In a DAS, remote radios are located throughout the venue to distribute the wireless signals. The challenge is to provide low-cost, resilient power to these remote radio locations. Mobile phones are not only relied on for entertainment, but they are critical for the public's safety to connect with emergency services. Using dedicated AC power involves multiple contractors and managing separate fiber and electrical infrastructures within the building.



### WHY DIGITAL ELECTRICITY™?

- **Simplicity and Speed of Deployment:** Venues can use the same pathways and by the same contractor to deliver power and fiber connectivity to the remote radios.
- **Cost:** Class 2 circuits can be installed without expensive conduit or armored cable.
- **Resilience & Reliability:** A large battery plant or uninterruptible power supply (UPS) provides emergency fallback power for the remote radios. Five 9's reliability can be provided with an N+1 power system design.

# 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.