

DIGITAL ELECTRICITY™ APPLICATION NOTE

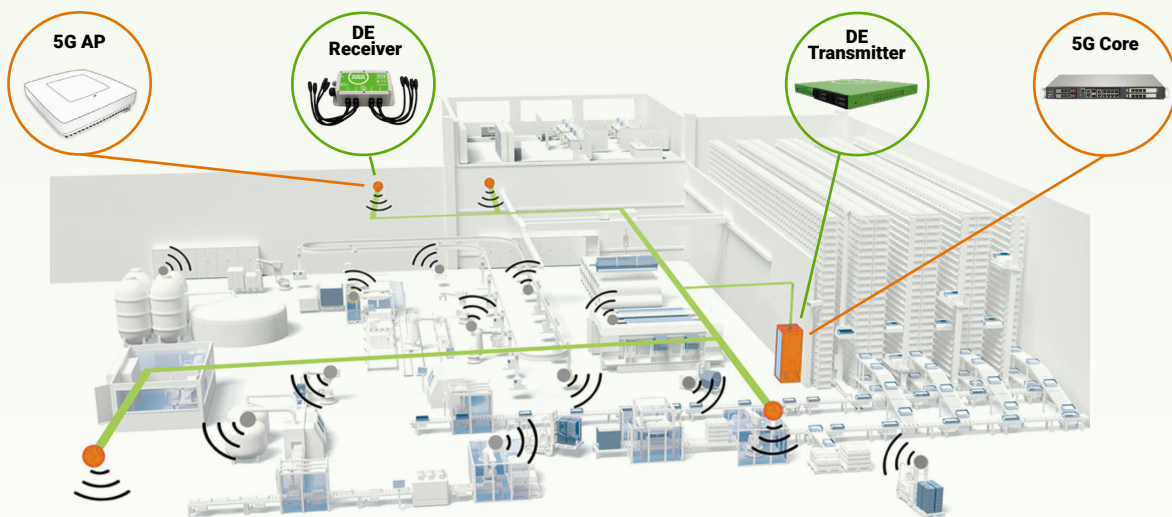
INDUSTRIAL PRIVATE NETWORKS

THE SCENARIO

New private 4G and 5G networks are adopting the same technology that was historically only used by mobile network operators. Private industrial networks offer key benefits for industrial IoT. A dedicated local network, with carrier grade performance and security, can be customized for specific features and functions like low-latency or quality of service. Private networks can address cellular coverage and capacity within facilities at a much lower cost than DAS.

THE CHALLENGE

In a private network, wireless access points (AP's) are distributed throughout the facility for optimal coverage and capacity. Local AC outlets may not be available close to an AP, and they would not have any fallback power. This is a big risk for business critical applications that require reliable communication because any local power issue can take down the AP. Using dedicated AC power involves multiple contractors and managing separate fiber and electrical infrastructures within the building.



WHY DIGITAL ELECTRICITY™?

- **Simplicity:** Digital Electricity™ supports multiple services, devices, and vendors.
- **Cost:** Power and data can be delivered to wireless access points in the same pathways by the same contractor, eliminating a parallel power infrastructure.
- **Flexibility:** The power distribution can be reconfigured by IT personnel as needed.
- **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.