



CASE STUDY

# Powering Intelligent Buildings with Zone Power Architecture



## Industry

Fault Managed Power  
Digital Edge Solutions



## Solution

Centralized Power Source  
Digital Electricity™ (DE)  
Channels Zone Boxes

## Introduction

In the ever-evolving landscape of smart buildings, the integration of technology and infrastructure plays a pivotal role. Our case study focuses on an innovative solution implemented in a warehouse facility with a small office space in Phoenix, AZ. The goal was to efficiently supply remote power to various devices using a Zone Power architecture.

## Project Overview

### The Facility

Our project site is a warehouse, a bustling hub of activity where efficient operations are critical. The facility houses inventory, logistics, and administrative functions. Additionally, there's a small office space within the warehouse premises.

## The Challenge

The challenge was to provide reliable power to critical devices distributed throughout the facility. These devices included:

**Meraki PoE Switches:** These switches serve as the backbone for network connectivity, powering essential components such as cameras, sensors, and Wi-Fi access points.

**Door Access Controllers:** In specific locations, the system needed to power access controllers, including keypads and door strikes.

## The Solution

Our team devised a robust solution using Digital Electricity. Here are the key components:

**Centralized Power Source:** We established a central location equipped with an uninterruptible power supply (UPS). This ensured continuous power availability even during brownouts.

**Zone Boxes:** These compact units were strategically placed throughout the facility. They were mounted on or near the ceiling or suspended from mid-span ceiling trusses.

**Digital Electricity (DE) Channels:** The heart of our solution, these channels transmitted power from the central location to the Zone Boxes. We utilized 34 DE channels to drive 20 RXAC-2M receivers.

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“The VoltServer team worked with our design team from the beginning to ensure the best possible application of Digital Electricity to help determine where it provided the most value for Circa.”

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### IMPLEMENTATION DETAILS

#### Distance Considerations

The distances to the remote zones varied significantly, ranging from 500 feet to 1,500 feet from the centralized power source. To ensure efficient power delivery, we used a 16AWG 4-pair cable to interconnect the Zone Boxes to the Digital Electricity Transmitters.



## Installation and Training

VoltServer, a leader in innovative power solutions provided a comprehensive web-based training session for the project partners. The training covered installation procedures, safety protocols, and system configuration. Armed with this knowledge, the team executed the installation accurately and successfully.

## Results and Future Expansion

The initial implementation has been a resounding success. The facility now enjoys uninterrupted power for critical devices, enhancing security, surveillance, and operational efficiency. As we move forward, Phase 2 of the project is on the horizon. It aims to double the amount of power using Digital Electricity, further empowering the intelligent building infrastructure. The Digital Electricity platform enables quick moves, adds, and changes. By over-provisioning the copper links, additional "dark copper."

## Conclusion

The Zone Power architecture has transformed our warehouse facility, demonstrating the synergy between technology and practicality. As smart buildings continue to evolve, innovative solutions like this pave the way for a more efficient and connected future.

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or call **888-622-8658**.

