

POWERMAND, INC.

# Case Study

## Small Building Big Opportunity



## Project Overview

Cipher Systems is an ISO-9001:2000 Corporation that specializes in complete product design solutions for their customers. Founded in 1987, Cipher has occupied a 8,000 square ft. single story building with six separate rooftop units, each with mechanical controls. Cipher also occupies 3,000 square ft. in an adjacent building.

## Challenge

The office space was uncomfortable. The existing ductwork made temperature control across work areas difficult. Also, building management wanted to lower not only their energy costs, but also the operating costs of maintaining comfort levels throughout both buildings.





# Solution

## DreamWatts® Energy Management System



### Design Criteria

## Attainable Savings with Immediate Payback

Each manual, mechanical thermostat was replaced with a RobertShaw 9825i2 communicating thermostat. Locations included the reception areas in each building, executive offices, customer meeting room, East and West hallways, the production and warehouse areas. A DreamWay™ gateway was placed in each building where it was connected to the office WAN. The systems mesh network capability insured a strong signal to each of the thermostats. The gateways were associated with one user account so the devices in both buildings could be scheduled and managed as one. The multi-site aggregation capability made the DreamWatts solution perfect for this company with dispersed operations.

### Solutions and Results

DreamWatts delivered energy savings and comfort far exceeding customer expectations through the deployment of the following energy management strategies:

**Wireless installation with simplified commissioning** – To reduce installation expense and minimize employee disruption, wireless thermostats were selected. At commissioning, default settings were utilized, with minimal adjustments needed once the system was in use.

**Comfort Settings** – Each thermostat was set to optimize comfort only when an area was occupied. Usage reports showed when overrides occurred, as well as when adjacent areas would overlap with competing heat and cool modes.

**Intelligent Scheduling** – Day types were programmed with occupied and unoccupied modes that included setting observed holidays as unoccupied.

### Building Aggregation –

Consolidating gateways into one web-based account reduced the time needed to maintain settings in both buildings.

**Override Control** – Occupants could manually override the temperature settings up to limits set by building management, providing comfort and control.

**Remote Access** – Building management now had internet access to view system status and make adjustments from any internet browser.

## Results

Cipher Systems decreased energy related operating expenses by 20% while increasing the comfort level in both buildings. Time spent to insure temperature setpoints were within building policy was reduced by 95%, achieving a one year payback, and more productive employees.