

## Success Story: Markley

Markets Served  
Data Center & IT

*"Because the efficiency is higher, we generate less wasted heat, and we need to produce less air conditioning, which allows us to enjoy power savings."*

*Chris McLean, director of data center design*

# Power Xpert 9395 units deliver high reliability, efficiency

#### Location:

Boston, Mass.

#### Segment:

Colocation

#### Problem:

Ensuring 100 percent uptime is a prerequisite for the major colocation facility, which supports more than 200 customers.

#### Solution:

Power Xpert™ 9395, ESS, VMMS, PDU, Service, Data Center Cages

#### Results:

A full lineup of Power Xpert 9395 UPSs keep the mission-critical data center up and running without a hitch.

#### Background

As New England's largest and longest operating multi-tenant, mission-critical telecommunications and data center facility, Markley holds the distinction of being the only "Carrier Hotel" in the region. Within 920,000 square feet of white and mechanical space, the highly secure center houses more than 200 tenants, including industry-leading financial, healthcare, academic, government, entertainment, and science and technology firms.

Since the company's inception in 1992, Markley has executed more than 500 telecom/data center transactions, while amassing a 3 million-square-foot portfolio of buildings located in Boston, Chicago, Miami, Las Vegas, San Francisco, Toronto, Paris, Marseille, Geneva, Milan and Frankfurt.

With connectivity to 50-plus domestic and international network providers, Markley serves as the intersection of all major fiber routes in New England. In addition, it houses the Boston Internet Exchange (BIX), which allows clients the ability to choose and connect to multiple and diverse networks and serves as the ultimate hub for creating and developing IP peering partner relationships.

Leveraging the collective knowledge and experience of its 24x7 staff, Markley's team of professionals is available to assist with all IT needs, whether building a private, fully customizable data center suite or constructing a cloud computing platform.

#### Challenge

Throughout all of the years of operating its data center, Markley's facility has never experienced a primary power outage. "If we were to go off grid, it would be catastrophic," stresses Chris McLean, director of data center design.

In addition to the potential for Markley to incur major financial penalties, an unexpected outage could literally prove to be life threatening, depending on which client systems were affected.

"We have customers who are doing research to cure cancer, hepatitis and other medical conditions," McLean says. "An internal failure of another client could black out key communications and impact public safety and welfare."

With such high stakes, it's not surprising that Markley chooses to invest in only the highest caliber power protection available — one capable of delivering unsurpassed reliability and uptime. Other considerations include efficiency, footprint and level of service.

"We compared a lot of different manufacturers," McLean acknowledges. But in the end, one solution stood out as the clear choice: the Power Xpert 9395 uninterruptible power system (UPS).



Powering Business Worldwide

## Solution

With seven 9395s safeguarding Markley's colocation business — and three more that were just ordered — the company can rest easy when it comes to the threat of outages and other power anomalies. Phased into the facility since early 2009, the UPSs support a broad range of applications and functions, from one financial institution's entire data center to Markley's own corporate office equipment to its building management functions. And while each application has its own set of requirements, time and time again, the company has been able to achieve the specific advantages it was seeking from the 9395.

Indeed, the state-of-the-art UPS has raised the bar in three-phase power protection technology. Delivering an unprecedented level of power performance, reliability and energy savings, the unit offers a wide scope of superior customer-driven benefits unmatched by competitive offerings.

To begin with, the innovative design offers the industry's highest efficiency rating of greater than 94 percent, which slashes utility costs, extends component life and results in cooler operating conditions.

"Because the efficiency is higher, we generate less wasted heat, and we need to produce less air conditioning, which allows us to enjoy power savings," McLean confirms.

On one of its 9395 units, Markley opted to deploy Eaton's Energy Saver System (ESS), which enables the UPS to attain an industry-leading efficiency level of greater than 99 percent, making it the only technology on the market capable of yielding such results. Using ESS, the 9395 intelligently adapts to utility power conditions while supplying clean power to the connected equipment. Even more, because UPSs using ESS maintain 99 percent efficiency even when lightly loaded, the technology can deliver gains of up to 15 percentage points in efficiency over traditional models in the typical operating range.

In fact, the energy savings from Eaton's ESS typically recovers 100 percent of the cost of the UPS over just a three- to five-year time period. At a 250 kW load, for example, the savings represents approximately \$4,000 per year per point of efficiency gain.

Eaton's Variable Module Management System (VMMS) technology was another option Markley chose to install on one of its 9395 units. VMMS, which optimizes overall system efficiency even at low load levels, allows the UPS system to set redundant power modules to ready state, with the remaining power modules driving the load with higher efficiency. When the load increases again and more power modules are needed, the system immediately shifts to additional modules. VMMS adapts both to a single UPS consisting of multiple power modules and to larger, multiple UPS parallel systems.

As a colocation provider, it pays for Markley to make the most out of every square foot in its facility. Because of that, the 9395's small footprint — up to 60 percent less than competitive units — was a boon for the company, as the units occupy minimal real estate.

"The small footprint allowed us to reduce the size of a recently constructed electrical room, which is a big advantage," McLean reveals.

Furthermore, as Markley's power needs grow, the 9395 can be expanded in building-block increments by adding additional modules, eliminating the need to purchase a new UPS.

McLean is also quick to praise the model's ease of use. "The unit interface is very intuitive," he explains. "We have a core group of technicians here and we want to make sure the UPS operation is straightforward. With the 9395 units, you can navigate through the contextual menus and perform the functions you intend to perform right out of the box."

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Printed in USA  
CS153014EN  
April 2013

Beyond the advantages afforded by the 9395, McLean says that Markley has been motivated to purchase Eaton units due to the company's outstanding service department. "The fact that we have a local service presence with someone we know and trust definitely factors in," McLean explains.

Referring to Eaton's service team as "an extension of our staff, a trusted resource," McLean reports that his customer service engineer (CSE) is helpful, knowledgeable and stays on top of the UPSs' maintenance requirements throughout the site.

"If something ever happens, you want to know you have a guy who has been in the trenches," McLean says. "Times and time again, Eaton has proven that."

Rounding out Markley's power solution are dozens of Eaton 225 and 300 kVA power distribution units (PDUs), which provide reliable data center power distribution for both raised and non-raised floor applications, with maximum flexibility in an integrated, factory-tested package.

Markley also uses Data Center Cages, which provide the ultimate level of security for valuable information systems in data center environments requiring subdivision or a higher level of security.

The rugged steel construction of the cages ensures structural integrity and security while providing ample ventilation. Eaton's Data Center Cages scale to future requirements and options such as segmenting a large cage or adding on to an existing configuration allow customers to adapt to changing needs.

## Results

With its comprehensive Eaton power protection solution in place, Markley can rest easy when it comes to assuring the integrity of its data center facility. The solution enables the firm to:

- Ensure continuous availability and uptime to not only its own critical equipment, but that of its customers
- Achieve industry-leading efficiency with the 9395's design, plus ESS
- Preserve space with the 9395's small footprint
- Easily manage power distribution needs with Eaton PDUs and ePDUs
- Partition colocation space with flexible Data Center Cages
- Maintain the ongoing health of its power protection solution with Eaton service



**Power Xpert 9395**

Learn how the Power Xpert 9395 can help you at [Eaton.com/9395](http://Eaton.com/9395).