



## Time Warner

## Case Study

### The Challenge

Protect revenue-generating data center equipment during the extended blackout that affected the United States in August 2003.

### The Solution

Liebert UPStation GXT UPS systems

### The Liebert Difference

- Double conversion technology
- Liebert quality

## An Extended Blackout Put UPS Systems to the Test; Liebert Passed With Flying Colors.

### The Situation

The major electrical outage that occurred in the United States in August 2003 represented a major test of business continuity plans and UPS performance. The combination of huge fluctuations in power quality that preceded the blackout, along with the outage itself, represented some of the most extreme conditions many data centers had ever experienced.

Liebert customer Time Warner confronted this event at its Manhattan facility. The data center at this location manages a number of complex content delivery services, both locally and nationally, including Road Runner high-speed cable modem service, video-on-demand, and insertion of TV commercials on local, regional and national cable channels. Downtime of this equipment translates directly into lost revenue.

The company uses both room-scale and rack-scale UPS protection at this facility. Rack-scale protection is provided by Liebert UPStation® GXT UPS systems and non-Liebert, line interactive UPS systems.

### The Solution

The Liebert UPStation GXT is a family of versatile, compact UPS systems that provide the superior protection of a true double conversion online UPS in capacities from 700 VA to 6 kVA.

UPStation GXT systems can be configured for rack mounting or as a free standing mini-tower. Their compact design makes them ideal for rack-based protection, providing up to 6 kVA in just 4U of rack space, with smaller systems available that utilize just 2U of space. They can provide up to 90 minutes of battery capacity at full load and are SNMP capable and generator compatible.

As a true double conversion UPS, the Liebert UPStation GXT is better able to protect critical systems before, during and after extended outages than line interactive systems. In fact, there were marked differences in how well the Liebert systems performed during the August 2003 compared to the non-Liebert line interactive systems.



*“Seeing the performance of the Liebert systems has convinced me that all of our critical systems need to be protected by double conversion UPS systems.”*

Scott Widney, IT Manager  
Time Warner

## The Results

While the Liebert UPStation GXTs performed flawlessly throughout the blackout, the line interactive systems experienced a number of problems, including:

- Batteries in the line interactive UPSs did not have the capacity to support the connected load while the back-up generators were started and stabilized; many shut down well before their rated back-up time and dropped critical loads unexpectedly.
- The line interactive UPS units were unable to support start-up on exhausted batteries. When the utility restarted with “dirty” power, the line interactive UPSs attempted to go to their already-spent batteries, causing the units to shut down unexpectedly and drop the load.
- After the blackout, the incoming power lost its neutral, and voltage jumped to 150 on one pole and dropped to 90 on the other. The line interactive UPS let this power anomaly through, destroying the power supplies on seven servers.

Not even the loss of neutral affected the output power from the Liebert systems.

“Battery maintenance has been an ongoing problem with the line interactive systems because of the frequency that these systems have to go to battery,” said Scott Widney, IT manager at Time Warner. “It is a problem we have lived with until now by stockpiling extra batteries on site. But seeing the performance of the Liebert systems has convinced me that all of our critical systems need to be protected by double conversion UPS systems.”



**LIEBERT CORPORATION**

1050 DEARBORN DRIVE

P.O. BOX 29186

COLUMBUS, OHIO 43229

800.877.9222

(U.S. & CANADA ONLY)

614.888.0246

(OUTSIDE U.S.)

FAX: 614.841.6022

[www.liebert.com](http://www.liebert.com)

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