



5PX eliminates fear of weather outages for wireless company

Location:

Huntsville, Ala.

Segment:

TV/Broadcasting/Communication

Problem:

The organization needed a robust solution capable of powering its entire data center, with the ability to charge from a generator and sustain two hours of backup time.

Solution:

Eaton® 5PX UPS

Results:

The 5PX facilitates the company's use of portable generators to power IT infrastructure, while protecting equipment from dirty power.

"The 5PX was exactly the solution we needed for our current location and size. It was affordable, easy to self-install and it can grow and move with us, making the investment even more worthwhile."

Marty Sellers, director of IT & facilities

Background

Synapse Wireless provides intelligent, wireless control and monitoring technology based on the Internet-enabled SNAP® network operating system. The company's Portal® and SNAP® Connect products provide a complete software development environment for easy application development and fast time to revenue, while its RF Engine® modules include an increasing number of MCU choices for both interoperability and second sourcing. Synapse also offers a complete line of LED lighting products in support of Future Lighting Solutions' Intelligent Lighting Platform (ILP) initiative, and can custom-design solutions for OEMs and partners.

Challenge

On April 27, 2011, a deadly EF-5 tornado ripped through the Huntsville area where Synapse is based, destroying high-tension power lines from three power plants that feed the local utility. The damage resulted in a six-day power outage — an unpleasant wake-up call for Synapse,

which had been protecting its equipment with individual, stand-alone uninterruptible power systems (UPSs) attached to each device.

The problem with that backup solution was that although Synapse's rented building has a small, manually started generator, "the low-cost, consumer UPS units would not go online or charge from the generator power, requiring us to cycle servers on and off with generator start/stop and refueling," explains Marty Sellers, director of IT & facilities. "That resulted in excessive downtime during the power outage and a lot of manual labor."

Following the tornado, Synapse turned to its managed services provider, Mapletonics, to recommend a new power protection solution for the company. Synapse's requirements included:

- A UPS powerful enough to run the entire data and network closet
- A unit capable of charging from the building's generator



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- A model with the capacity to sustain at least two hours of backup time, in order to allow the manual startup of the company's portable generator

Solution

Synapse discovered everything it needed in the Eaton 5PX, which protects more devices by delivering 28 percent more wattage compared to traditional UPSs. As such, the 3000 VA unit purchased by Synapse easily safeguards the company's range of critical equipment, including a Windows Small Business server, a Linux server hosting the firm's engineering applications, an offsite backup appliance, various network devices including routers and switches, and the building's telephone and voicemail systems.

"They are all critical to the business," Sellers emphasizes, noting that in the event of unexpected downtime, the company would lose access to its project files and web-based ERP system, as well as email, voice mail and phone lines, if it were not properly protected.

In addition to the robust capacity offered by the 5PX, Synapse also appreciated the ability to bolster runtime with optional extended battery modules (EBMs). Having added a single EBM, the company is afforded two full hours of backup time in the event of a power outage — a key requisite since its generator must be manually connected and started during an outage.

Even more, should Synapse's backup requirements increase in the future, the company can easily connect additional EBMs. "We can add more battery for capacity as our needs grow," says Sellers.

More importantly, the 5PX is able to charge from the company's generator during a lengthy blackout. "We will now be able to keep email and business systems available 24-hours per day on generator power during an extended outage, even when the generator has to be shut down for refueling," Sellers points out. "With one 30-amp connection, it is quick and simple to manually move the UPS from main power to generator power in the event of an extended outage."

Likewise, the simple connection made the 5PX a breeze to self-install, according to Sellers. "The server area in our leased space already had an L5-30R receptacle and our generator has the same connection, so it's a single plug to move from line power to generator power, and the UPS supports our whole operation."

The IT director is also impressed by the 5PX's small footprint. "It takes up very little floor space in our data room," he reports, "and I like the fact that it's flexible enough to sit on the floor, or we can rackmount it if we need to. And it will be easy to move to a new location."

Indeed, since Synapse currently resides in a rented building, the company's power protection solution will be able to easily accommodate a future relocation to a permanent site.

"The 5PX was exactly the solution we needed for our current location and size," Sellers says. "It was affordable, easy to self-install and it can grow and move with us, making the investment even more worthwhile."

Further enhancing the 5PX's reliability is Eaton's exclusive ABM® technology, which uses an advanced, three-stage charging technique and closely monitors battery health to increase battery service life by 50 percent.

Sellers also gives kudos to the unit's next-generation LCD display, which offers a graphical interface that provides all critical UPS information in a single screen view. The user-friendly menu allows information to be viewed and settings controlled with the simple push of a button.

"It made the installation easier and I like the fact that I get all the measurements displayed when it's running on generator," Sellers says. "It gives me an immediate view of how well the generator is performing."

Synapse also relies on Eaton's Network Card-MS to stay apprised of current conditions. "Its remote notification capability notifies key personnel via text message when the system switches to battery power or back to main power," Sellers explains.

These capabilities were recently put to the test when the building suffered a brief power outage.

"The UPS covered the outage so that it was a non-event," Sellers reports. "The remote notification worked as planned."



Eaton 5PX

Results

Synapse couldn't be more pleased with its new UPS solution — and is more than ready to weather the consequences of any future tornadoes or other unexpected events.

"A 5PX was purchased to better facilitate using portable generators to power our IT infrastructure while protecting our equipment from electricity of unknown quality," Sellers sums up. "The unit has been great."

With the 5PX in place, Synapse Wireless is now able to:

- Power its entire data and network closet
- Charge the UPS from the building's generator
- Sustain two hours of backup time with a single EBM
- Easily relocate the unit when it moves to a new building

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Printed in USA
COR193CSS
October 2011

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