

TRIPP·LITE

CASE STUDY

SUMMARY

Customer

The Waller Independent School District is located about 40 miles outside of Houston, Texas. Its eight campuses serve over 5,400 students in a 328-square-mile area.

Goal

Design and implement a new data center with sufficient space, power and cooling capability.

Solution

SmartOnline™ 3-Phase UPS System

- [SU40K](#)

3-Phase Power

Distribution Center

- [SUDC208V42P40M](#)

Power Distribution Units

- [PDUMH20](#)
- [PDU40TDUAL](#)

Rack Enclosure and

Open Frame Rack

- [SR42UB](#)
- [SR2POST](#)

Power Management Accessories

- [SNMPWEBCARD](#)
- [ENVIROSENSE](#)

Rack Accessories

- [SR1UPANEL50](#)

3-Phase Distribution Cabinet Accessories

- [SUBB120](#)
- [SUWL520C-5](#)
- [SUWL520C-10](#)
- [SUWL520C-15](#)

External Battery Packs

- [BP480V40C](#)

Results

A new data center and complete power protection

Waller Independent School District Implements New Data Center with Customized Design Solutions from Tripp Lite

Waller
Independent School District

“Within three days, we had moved in and made the new data center completely operational. Calling Tripp Lite was the best call I ever made.”

—Ted Jongbloed,
Director of Technology Services
Waller Independent School District



Customer

The Waller Independent School District (Waller ISD) is located about 40 miles northwest of downtown Houston, Texas. It comprises eight campuses which serve over 5,400 students in an area of 328 square miles. Providing educational opportunities for students in pre-K through twelfth grade, as well as in special education and in adult education, Waller ISD strives to be a leader in all aspects of educational technology.

Goal

Technology Services Director Ted Jongbloed told Tripp Lite that, in the summer of 2010, the Waller ISD faced a disaster waiting to happen. “We began construction of a new data center because our existing closet had run out of space, power and cooling.” To make matters worse, he continued, “As we sat down with our architects and construction engineers, it became apparent that they had no experience in designing a data center.” Following up on a colleague’s recommendation, Jongbloed called Tripp Lite. “Representing a small district, and with little experience in this type of work, I was very apprehensive about getting a good technical solution,” he said. “I figured I would get a few ready-made spec sheets and have to figure the solution out myself.”

“Instead,” he said, “I got five-star service.” He worked with Tripp Lite representatives Charlie Neel and Paul Wampach, and referred to their collaboration as “a great experience. Paul provided excellent recommendations and the Tripp Lite staff even helped coordinate the requirements with our retail vendor and the electrician on the job site. At each step, I got detailed recommendations on equipment required, interconnection requirements, and even voltage and cabling solutions.”

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Solution

SU40K SmartOnline E3 Modular 3-Phase UPS System

Ideal Output Power Protects Critical Systems

- True on-line, double conversion operation delivers precision-regulated, pure sine wave output, isolating critical systems from power problems. Zero transfer time to battery ensures that critical loads will not be dropped during power failures

Modular Architecture Eliminates Downtime

- Internal N+1 power module redundancy and fault-tolerant bypass features keep critical systems productive around the clock

1:1 Generator Sizing Lowers Installation Costs

- Advanced IGBT rectifier produces best-in-class 3% THDi (input Total Harmonic Distortion), eliminating costly over-sizing requirements for generators

Extreme Efficiency Lowers Operating Costs

- Efficiency up to 96% significantly lowers power and cooling



SUDC208V42P40M 3-Phase Power Distribution Center

- Supports 40kVA 3-Phase UPS power distribution in data center equipment racks
- Integrated 3-breaker 208V service bypass switch enables hot-swap replacement of 40kVA 3-phase UPS systems without dropping the connected critical loads
- Secure front and rear doors, removable side panels



PDUMH20 Metered Power Distribution Unit

- Provides safe, reliable power distribution with digital current meter
- Displays total power consumption, permitting maximum PDU utilization



PDU40TDUAL Basic Power Distribution Unit

- Supplies dual-circuit power distribution for critical networking equipment
- Ideal for servers with dual redundant power supplies and other equipment in heavily loaded racks



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SR42UB 42U SmartRack Premium Enclosure

- Premium, cost-effective rackmount solution for high-density servers and all network equipment
- 3000-lb stationary/2250-lb rolling load capacity
- Locking, reversible, removable front door; locking, removable split rear doors; locking, removable side panels



SR2POST 45U 2-Post SmartRack Open Frame Rack

- Organizes and secures network rack equipment
- Black aluminum construction with round threaded and numbered mounting holes
- Toolless button holes accept PDUs or cable managers



SNMPWEBCARD Web Management Accessory Card

- Enables the UPS to be remotely controlled as a managed device on the network
- Provides remote viewing of site electrical data, UPS self-test and alert logs, electrical problems and more
- Permits remote reboots of locked devices without interrupting power to other loads

ENVIROSENSE Environmental Sensor

- Connects to the Tripp Lite SNMPWEBCARD
- Enables remote temperature/humidity monitoring in network environments
- Monitors and controls alarm, security and telecom devices through a dry-contact interface



SR1UPANEL50 1U Blanking Panel Kit

- Fills unused rack spaces to optimize airflow and prevent recirculation of warm air
- Improves cooling efficiency
- Toolless mounting
- Fits any square-hole, EIA-compliant enclosure



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SUBB120 Single-Phase Circuit Breaker

- Cutler Hammer single-phase single-pole circuit breaker for use with Tripp Lite rack distribution cabinet
- 120V, 20A

**SUWL520C-5, SUWL520C-10, SUWL520C-15 Single Phase Whips for Breakered 3-Phase Distribution Cabinet Applications**

- 5-ft., 10-ft. and 15-ft. lengths with 3-ft. removed outer jacket
- 3-conductor, 12 AWG stranded wire

**BP480V40C External Battery Pack**

- Extends runtime of compatible Tripp Lite UPS Systems using special "+/-" 240VDC configuration
- Hardwire installation

**Results**

The Waller Independent School District now has complete power protection and a new data center from Tripp Lite. Ted Jongbloed summarized the path from design through implementation as follows: "The Tripp Lite team took my raw list of servers and electrical requirements and developed an entire 3-Phase UPS system solution. They then helped with Rack and Enclosure specifications. They also helped the new construction electrician understand the electrical requirements. When they finished, I had a complete list of equipment needed to create a state-of-the-art data center. When it came time for installation, the Tripp Lite team again provided the necessary support to install and get the new UPS systems up and running. Within three days, we had moved in and made the new data center completely operational. Not one hitch. My school board president stated, 'I did not think you could pull it off. Most IT projects I have seen ALWAYS have a delay.' Calling Tripp Lite was the best call I ever made."



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