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How the University of Texas San Antonio Got More from Its Infrastructure with CPI's Ongoing Support



At Chatsworth Products (CPI), we know that building an effective data center is not just about technology—it's about creating partnerships that adapt and evolve with our customers' needs. This story from the University of Texas San Antonio (UT San Antonio) is a testament to how collaboration, engineering expertise, and a commitment to ongoing support can drive smarter decisions and better long-term outcomes.

A Partnership Built on Smarter Design

UT San Antonio engaged CPI for support as new staff came on board and began getting up to speed with the existing setup. The objective was clear: deliver a cabinet system that could meet a specific kilowatt (kW) load per cabinet, supporting the university's IT infrastructure while managing operational costs – right from the start.

CPI provided a cabinet system equipped with Vertical Exhaust Ducts (VEDs). These VEDs enable passive airflow management by channeling hot air directly to the return plenum, which reduces hot air recirculation and increases cooling efficiency. To ensure optimal implementation, CPI partnered with UT San Antonio to align airflow strategies with the university's operational goals—offering guidance on the principles of passive airflow containment to support both current performance and future scalability.

Beyond cabinets and airflow management, CPI also supported UT San Antonio in selecting Monitored PDUs tailored to their power distribution requirements. To address the university's strong emphasis on security, CPI integrated a cabinet-level access control solution—giving UT San Antonio the ability to secure its physical infrastructure and protect sensitive data.

Challenges Emerge: The Value of Ongoing Support

About eight months after the initial installation, UT San Antonio reached back out to CPI. They had purchased access control locks for their cabinets and needed additional guidance to fully leverage the system's capabilities. CPI stepped in without hesitation—because for us, ongoing support isn't an afterthought, it's a core part of the relationship.

Field Applications Engineers from CPI visited UT San Antonio's site to provide hands-on training and share best practices for managing physical security in a dynamic environment. The team advised how to handle temporary visitors without issuing permanent access badges, suggesting remote access control solutions that balanced security with operational simplicity.



Vertical Exhaust Ducts



Monitored eConnect® PDU



RFID Lock for Security

A Changing Landscape: Rising Demands and New Questions

Simultaneously, UT San Antonio's data center was facing new pressures. The arrival of higher-density IT equipment meant that their cabinets were now expected to handle significantly higher thermal loads. This sparked important questions:

- **What is the true maximum load each cabinet can handle?**
- **Is it safe to increase equipment density without compromising performance or reliability?**
- **Will the existing setup be sufficient, or would expensive upgrades be required?**

While conducting a walk-through of the newly installed data center, a discussion began about how UT San Antonio could handle significantly higher thermal loads.

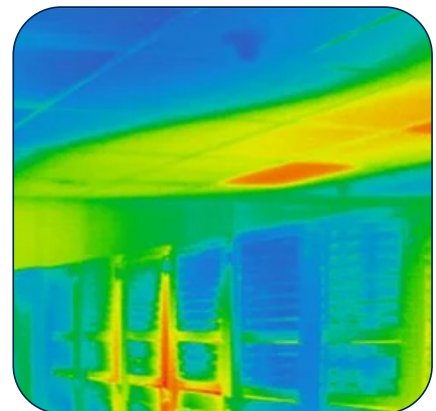
For many data centers, this kind of challenge might immediately lead to large capital expenditures—new cabinets, more advanced cooling infrastructure, or additional floor space. But CPI believes that good engineering and data-driven insight should always come before new spending.

Pushing the Limits of Existing Infrastructure with Thermal Modeling

Instead of jumping straight to new equipment purchases, CPI proposed a more strategic and cost-effective approach – built on thorough pre-installation planning and precise integration of airflow management and power delivery systems – culminating in conducting a Computational Fluid Dynamics (CFD) analysis. This type of advanced thermal modeling uses real-world data and physics-based simulations to map airflow and temperature variations throughout the data center environment.

For UT San Antonio, the CFD analysis was a way to see exactly how air moved within and around their cabinets. It would highlight potential airflow blockages, identify opportunities for reconfigurations, and establish a clear baseline for how far their current setup could be pushed before risking performance issues or overheating.

The CFD study was designed with one core objective: validate UT San Antonio's existing investment. By creating a detailed, data-backed picture of their environment, CPI aimed to help the university make smarter decisions—whether that meant minor adjustments to the current system or a well-justified case for upgrades in the future.

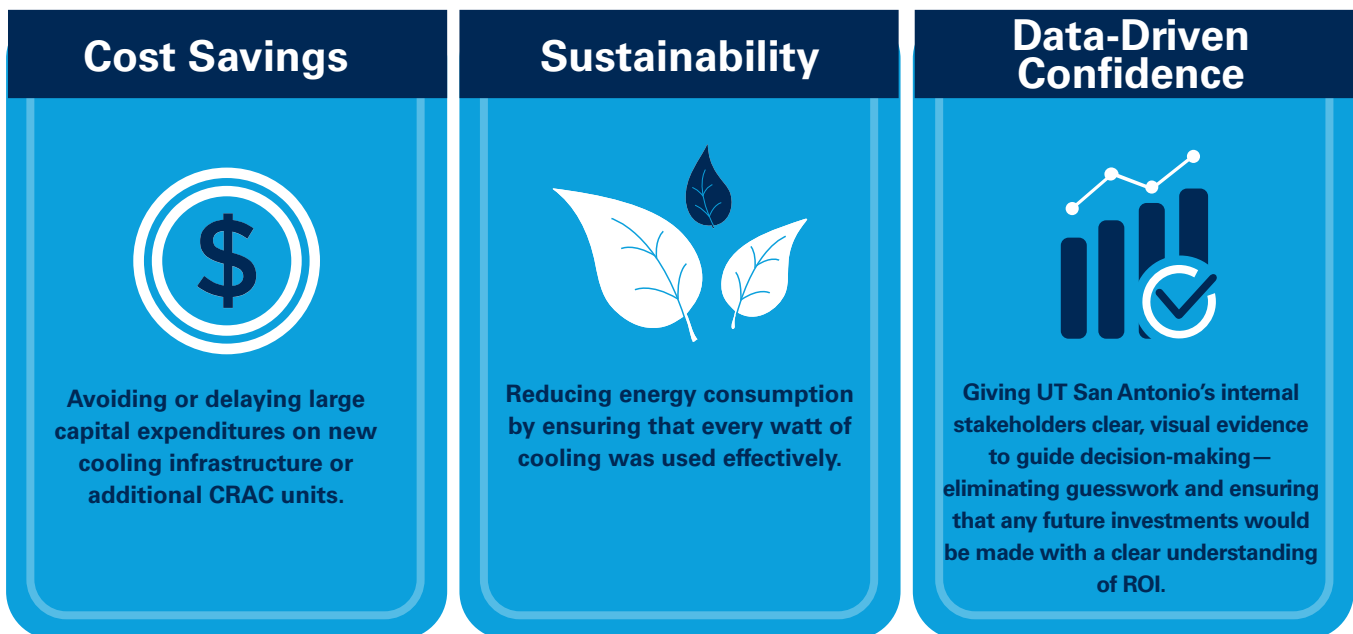


*Computational Fluid Dynamics
(CFD) analysis*

Optimization: A Path to Better Performance and Cost Savings

CPI's thermal modeling revealed insights that went beyond a simple thumbs-up or thumbs-down verdict on the cabinets' capacity. The analysis showed exactly how much additional load UT San Antonio's cabinets could handle safely and where small, low-cost configuration changes—like re-aligning airflow paths or fine-tuning blanking panel placement—could unlock more performance.

This kind of information is invaluable. Instead of defaulting to expensive new purchases, UT San Antonio gained a data-driven strategy for maximizing their existing infrastructure:



Of the partnership, Jason Skow, Data Center Supervisor, UT San Antonio, said, "CPI's support has been instrumental in helping us optimize our data center. Their team didn't just deliver the hardware—they took the time to make sure every component worked together as a complete solution. That kind of partnership adds long-term value well beyond the initial deployment."

*Their team didn't just deliver the hardware—
they took the time to make sure every component
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*Jason Skow,
Data Center Supervisor, UT San Antonio*

Empowering Customers Through a Holistic Approach and Informed Decisions

CPI's engagement with UT San Antonio went beyond delivering technology; it was about creating a true partnership. Throughout the process, CPI's team provided practical education on cabinet-level access control, airflow optimization, and thermal load balancing—empowering UT San Antonio to become more self-sufficient and better prepared for future growth.

CPI's approach centered around four core principles:

- Pre-Installation Integration:**
 CPI ensured that UT San Antonio's cabinets, airflow management, power delivery, and access control systems were seamlessly integrated, maximizing performance and minimizing potential disruptions from the outset.
- Ongoing Engagement:**
 CPI's commitment didn't end at deployment. We proactively followed up, conducted on-site visits, and tailored recommendations to UT San Antonio's evolving needs—ensuring continued optimization and long-term success.
- Practical Engineering Insight:**
 CPI engineers brought real-world expertise to the project, using field-tested knowledge to address complex challenges.
- Customization and Flexibility:**
 Every data center is unique. CPI delivered tailored cabinet solutions and advanced CFD thermal modeling to help UT San Antonio see how far they could push their current setup before needing costly upgrades.

As UT San Antonio's story illustrates, the real power of a data center investment lies in its ability to adapt. CPI's ongoing support, thermal expertise, and collaborative engineering approach allowed UT San Antonio to turn what might have been a costly problem into a manageable, strategic opportunity.

"At UT San Antonio, our goal was to ensure they could get the most from their existing infrastructure," said Tom Cabral, Field Applications Engineer, CPI. "We worked side-by-side with their team to fine-tune airflow containment, configure access control, and use CFD modeling to identify optimization opportunities. It wasn't just about providing support—it was about delivering actionable insight and building a foundation they could scale on confidently and cost-effectively."



For any organization facing rising thermal demands and shifting workloads, CPI's approach sets a clear path: start with what you have, understand it thoroughly, and then make incremental, data-backed decisions to ensure performance, sustainability, and cost-effectiveness.

For UT San Antonio, working with CPI meant more than just procuring equipment—it meant gaining a trusted partner. By combining engineering insight with data-backed CFD analysis, CPI helped UT San Antonio maximize the value of its original investment—proving that smarter design and informed partnerships can deliver more than expensive, one-size-fits-all solutions.

Looking Ahead

The relationship between CPI and UT San Antonio doesn't end here. As the university's data center continues to grow and evolve, CPI will remain a trusted partner—offering engineering insight, tailored solutions, and the peace of mind that comes from knowing you're not alone in navigating the complexities of modern IT infrastructure.



It starts with thoughtful integration and meticulous pre-installation planning—ensuring that every component of the system works seamlessly together from the very start. It's about empowering our customers to get the most from every investment, unlocking the full potential of the technology, and minimizing total cost of ownership through continuous support and practical insights. That's what a true partner does.

About Chatsworth Products

At Chatsworth Products (CPI), it is our mission to address today's critical IT infrastructure needs with products and services that protect your ever-growing investment in information and communication technology. We act as your business partner and are uniquely prepared to respond to your specific requirements with global availability and rapid product customization that will give you a competitive advantage. At CPI, our passion works for you. With over two decades of engineering innovative IT physical layer solutions for the Fortune 500 and multinational corporations, CPI can respond to your business requirements with unequaled application expertise, customer service and technical support, as well as a global network of industry-leading distributors. Headquartered in the United States, CPI operates from multiple sites worldwide, including offices in Mexico, Canada, China, the United Arab Emirates and the United Kingdom. CPI's manufacturing facilities are located in the United States, Asia and Europe.

chatsworth.com
techsupport@chatsworth.com
800-834-4969



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