



# Laredo Independent School District Case Study

## About Laredo Independent School District

Laredo (Texas) Independent School District is comprised of 30 educational institutions: 21 elementary schools, four middle schools, three high schools, three magnet schools, and the Early College High School. Founded a century ago as a one-room school, the district today serves a 13-square-mile area with a population of over 200,000. Approximately 90 percent of the students are from economically disadvantaged families.

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building a smarter,  
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## Company

Laredo Independent School District

## Countries

US

## Business Challenges

To provide a highly reliable and scalable infrastructure that empowers the district to expand the use of technology in the classroom, streamline administration in the schools and the data center, and expand communication among students, staff, parents, and the community.

## Panduit Solution

Panduit Data Center and Connected Building Solutions featuring TX6A™ 10Gig™ UTP Copper Cabling System and Fiber System for proven performance, high reliability and scalability; Net-Access™ Cabinets, NetFrame™ Racks and NetManager™ Cable Management for greater accessibility and space utilization; and StructuredGround™ Grounding System for Data Center Grounding provides high quality, dedicated grounding to maintain system performance, improve network reliability and protect equipment and personnel.

## Business Benefits

A converged IP network, built on Panduit's Data Center and Connected Building Solutions and based on the Unified Physical Infrastructure<sup>SM</sup> approach, enables LISD to provide technology-rich education to low-income students, while raising overall efficiency by replacing paper processes with electronic document management.

# Creating a Bright Future for Low-Income Students with a Unified Physical Infrastructure

Laredo Independent School District (LISD) implemented a Panduit Unified Physical Infrastructure<sup>SM</sup> solution to create a robust and highly available network that provides students, teachers and staff access to diverse technology resources for enhanced learning and educational excellence.

## Business Challenges

LISD previously had a decentralized IT system with stand-alone servers and on-site technicians at each school. This approach was inefficient and costly, and made it difficult to centralize information, resources, and expertise. Having a series of IT "islands" also led to a mix of components and platforms that prevented implementation of standard, district-wide practices and procedures. With a large geographical area and so many schools to manage, the district wanted to replace this diverse environment with a consolidated and converged network infrastructure capable of integrating a range of systems from learning applications to telephony, videoconferencing, and surveillance.


This infrastructure needed to address operational challenges in several areas: streamline school and district administration through cost-effective automated processes; enhance surveillance and permit the addition of access controls for greater safety; and provide centralized management of IT and building systems.

## Strategic Objectives

Technology plays a critical role throughout the educational process at LISD. Technologies, ranging from multimedia applications and Internet resources to videoconferencing, help keep students engaged and interested so that they learn more effectively, resulting in fewer disciplinary problems. Technology also enables teachers to add interactivity, remote collaboration, and online research to their lessons, preparing students for the demands of the work world. Therefore, a key strategic goal for the project was to ensure high availability and performance so that students, teachers, and other staff would have uninterrupted access to these resources.

## Unified Physical Infrastructure





According to Roy Lanier, now retired, who was the chief technology officer overseeing the project at the time, “Kids today are born with technology and they expect the school system to provide it. We are committed to integrating new technologies into the curriculum on an ongoing basis.” He added, “My number one requirement for the physical infrastructure was reliability. I didn’t want to have to worry about supporting the infrastructure.”

LISD also needed a solution that was flexible, agile and scalable to allow easy integration of new technologies, and support anticipated growth in enrollment. In particular, LISD was aiming for a 1:1 computer-to-student ratio, which would add many more desktops to the network. Other plans included installing VoIP phones in each classroom, online testing capability, and automating many tedious administrative processes, such as grading.

A key objective was increasing communications with parents and the Laredo community. Lanier noted that LISD wanted to provide a Web portal for parents to view their children’s grades and tests, and videotaped school board meetings and other important events for online access.

Finally, district administrators wanted the ability to aggregate and analyze data on students and teachers across all schools for faster and better-informed decision making, reporting, and goal setting.

## **Panduit’s Unified Physical Infrastructure**

Panduit’s industry-leading Unified Physical Infrastructure<sup>SM</sup> (UPI) approach to infrastructure design and development integrates critical systems – communication, computing, power, control, and security – to allow organizations like LISD to boost reliability, improve management, lower costs, and prepare for new technology advancements.

The district chose Panduit’s Connected Building and Data Center Solutions, built on UPI principles, to provide a converged IP-based network as the platform for centralized monitoring, management, and control of information systems and building functionality across all schools and campuses.

Panduit’s UPI approach has allowed LISD to achieve nearly perfect reliability and quickly scale up to accommodate additional users, computers, and technologies. The powerful IP-based network provides standardization across the networking environment, and a foundation for continuous technological advancement.

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## Panduit Solution

Because of the large percentage of economically disadvantaged students it enrolls, LISD qualifies for the highest level of federal reimbursement under the E-Rate program. Through this ongoing program, each district school periodically receives updates and enhancements to its technology capabilities.

“Thanks to E-Rate, we were able to afford a solid infrastructure as well as make regular upgrades,” Lanier said. “At the same time, we must control costs. So when we looked for a strategic partner,

***“...we wanted a long-term relationship with an infrastructure leader that could help us provide the best solution, while achieving cost savings through greater IT efficiency and scalability.”***

Lanier researched various infrastructure vendors and also asked for recommendations from Cisco, LISD’s network hardware partner. “It’s like building a house – you need a solid foundation to build a safe and secure home. Similarly, in a network, a solid foundation built on a robust infrastructure can significantly improve reliability, scalability, and agility.”

He continued, “The most important, yet often overlooked, part of the network is the physical infrastructure. You can install the latest and greatest Cisco technology, but without the right infrastructure, you are taking a risk.” Based on this research, he selected Panduit for its innovative products and ability to serve as a trusted advisor over the long term. Panduit’s strong partnership with Cisco and other leading vendors was also an important criterion.

LISD implemented a converged, IP-based network based on the Panduit Unified Physical Infrastructure<sup>SM</sup> approach. The IP-based infrastructure centralizes the management of many different systems, from surveillance cameras, access points for the wireless network, and point of sale terminals in the cafeteria, to refrigerators and freezers in the food service division.

The district upgraded to TX6A™ 10Gig™ UTP Copper Cabling System on each campus to support the greater demands of new technology. In the data center, the Panduit solution includes Net-Access™ Cabinets and NetFrame™ Racks for 150 servers, and the StructuredGround™ Grounding Solution. Panduit’s NetManager™ Cable Management system is a Lanier favorite: “I don’t like ‘spaghetti’ and Panduit keeps the data center neat and organized.” In the schools, Panduit jacks, outlets and other components are also used in each classroom.

Unified Physical Infrastructure





## Business Benefits

Over the dozen years of its partnership with Panduit, LISD has achieved a number of goals. First, the robust and reliable Panduit infrastructure makes a direct contribution to educational achievements by ensuring high system availability.

Lanier stated, “The stability and reliability of our infrastructure mean students and teachers can make the most of technology resources, whether it’s online learning at the University of Texas, a class in financial management that taps into the New York Stock Exchange ticker, or a videoconference to tour a Smithsonian museum in Washington, DC.” Another important benefit has been cost savings through standardization and centralization. Instead of the previous mix of hardware and software, which required on-site administration and wasted resources through duplication, the system is monitored and managed from the data center, and all schools benefit from the same technology, applications, resources, and support.

The scalable and flexible Panduit infrastructure provides the foundation for ongoing improvements in district operations. For example, LISD recently upgraded to automated grading and attendance, and made a data warehouse of student information available to teachers. “Updating our infrastructure with the new grading system was effortless, saving us time and additional costs. Now teachers can spend more time educating students, and with on-demand access to complete data, they can develop individualized instruction plans and prescriptive tutorials.” This automation upgrade also helps LISD move closer to its sustainability goal of reducing paperwork.

Other innovations in the works include enhancing the Web portal for parents and adding access control capability to the security system.

***“The stability and performance of the Panduit Unified Physical Infrastructure has enabled us to optimize the use of technology in the classroom and improve the educational experience for both students and teachers.”***

Roy Lanier



## Real-World Solutions to Ensure the Success of Our Customers

*With a proven reputation for excellence and technology innovation, a robust ecosystem of global partners, and long-term alliances with top industry leaders, Panduit is a valuable, trusted partner offering strategic vision and real-world solutions to ensure the success of our customers.*



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Panduit is an industry leader in developing innovative technology solutions that meet the rapidly evolving needs of our customers around the world. Our commitment to continued leadership is supported by significant ongoing investment, dedicated manufacturing facilities, strategic technology alliances, and collaborative R&D with other industry leaders.



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Panduit's ongoing commitment to excellence and our technology alliances with key industry leaders such as Cisco Systems, EMC, Emerson, and IBM enables our highly skilled and knowledgeable global sales, systems engineering, and technical support teams to engage with critical customer challenges that range from initial problem determination all the way to resolution. Local specialists, trained to global standards and competencies, provide consistent regional support that brings value to local business. Our global value chain, which combines manufacturing, distribution, and service, provides prompt responses to customer-related issues, and streamlines procurement and delivery to any global destination.



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Panduit employs a consultative approach to identify customer needs and engage appropriate partners in a collaborative fashion to serve our customers. Panduit's robust ecosystem of architects, consultants, engineers, designers, systems integrators, contractors, and distributors offer a full portfolio of lifecycle services. Our partners are trained on relevant services to Plan & Design, Build & Deploy, and Maintain & Operate to deliver predictable and measurable results.



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### Eco-Sustainability & Global Citizenship

With a long-standing commitment to environmental excellence, Panduit continually develops and implements solutions designed to protect, replenish and restore the world in which we live and operate. This commitment is demonstrated by Panduit's LEED Gold certified new world headquarters and future sustainable building plans using its own revolutionary Unified Physical Infrastructure<sup>SM</sup> approach to enable convergence of critical systems for driving energy efficiency.

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