

Case Study: Region 16 and Duos Edge AI Modernize Rural Texas Education Infrastructure

Industry: Education / Digital Infrastructure

Company Size: 201-500 employees

Key Solution: Modular Edge Data Center

Use Case: Distance Learning, Data Centralization, AI and Quantum Research Hub

Location: Texas Panhandle

Website: www.esc16.net

OVERVIEW



Serving 60 school districts across the Texas Panhandle, Region 16 Education Service Center faced the challenge of modernizing a costly, fragmented connectivity model while supporting nearly 80,000 students spread over thousands of square miles. The region needed reliable, efficient, and sustainable data infrastructure to support distance learning, advanced technology adoption, and long-term economic growth. Region 16 partnered with Duos Edge AI to deploy a purpose-built, zero-water modular Edge Data Center that centralized its operations and strengthened network performance.

"We went from one data center supporting 60 small towns to a future where many data centers will create resilient and secure infrastructure, creating opportunities that could have never existed before. We are not behind in the technology leap that is coming—instead, we are ahead."

— Michael Keough, Chief Information Officer, Region 16 ESC

THE CHALLENGE



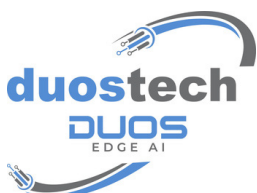
Providing reliable connectivity to 60 school districts across the Texas Panhandle was no small task. Region 16 Education Service Center faced rising costs, limited control, and inconsistent performance from third-party network providers, which made it difficult to deliver dependable access for an estimated 80,000 students. As demand for digital learning and data-intensive applications grew, Region 16 needed a centralized solution that could modernize its infrastructure, strengthen network reliability, and reduce operating costs.

"We started by needing to change connectivity models for schools. By using third-party providers, the cost to schools was high and the connections were less than optimal."

— Michael Keough, Chief Information Officer, Region 16 Education Service Center



80,000
Student supported



WHY DUOS EDGE AI



Duos Edge AI was founded in summer 2024. Region 16 reached out to the company for several reasons, including:

- Zero-water cooling technology eliminates water use and supports regional sustainability.
- Purpose-built construction delivers an enterprise-grade, SOC 2-compliant facility built for performance and security.
- Community-first approach shows Duos' commitment to education and local economic growth.
- Partnership mindset ensures close collaboration on strategy and future expansion.

SOLUTION DEPLOYED



1

Infrastructure:

Purpose-built, zero-water Edge Data Center with SOC 2-compliant design and efficient power and cooling systems.

2

Deployment Location:

Amarillo, Texas, serving 59 school districts across the Panhandle.

3

Primary Use Case:

Distance learning, centralized data operations, and AI and Quantum research.



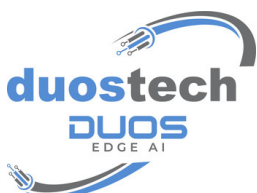
4

Integration:

Seamless migration of data infrastructure with automated monitoring and reduced maintenance needs.

"Duos Edge AI is proud to partner with Region 16 in delivering a zero-water, purpose-built Edge Data Center that redefines what's possible for rural communities. Together, we're advancing sustainable infrastructure, digital equity, and the next generation of learning."

— Doug Recker,
CEO and Founder,
Duos Edge AI



RESULTS & BUSINESS IMPACT



80,000
STUDENTS

Supported across
59 school districts



\$30,000
IN BATTERY BACKUPS

Avoided through elimination of
generator replacement

- Reduced operational costs by removing the need for generator replacement and **\$30,000** in battery backups.
- Improved network reliability and performance across **60 school districts**.
- Offloaded power and cooling demands, freeing staff to focus on educational technology initiatives.
- Created new learning opportunities for students through real-world exposure to advanced data infrastructure.
- Attracted business and workforce growth throughout the Texas Panhandle.
- Enhanced regional resilience with secure, enterprise-grade infrastructure supporting nearly **80,000 students**.

LOOKING AHEAD



Region 16 views Duos Edge AI as a long-term partner in advancing education and regional connectivity. Future plans include:

- Deployment of additional Edge Data Centers across the 26,000-square-mile Texas Panhandle
- Expansion of fiber infrastructure to connect new centers and strengthen network resilience
- Collaboration on AI and Quantum learning initiatives for students

