



Case Study

# School District Upgrades Intercom System to Improve Performance, Cost, and Safety

## The client

The client is a consolidated independent school district with 22 campuses in Texas. They serve about 10,600 students and employ more than 400 staff.

## The challenge: Legacy systems must integrate with modern solutions

The client’s analog system relies on a ‘backbone’ of cabling that runs from classrooms to a central hub in the main office and requires teachers to press an intercom button to call into the main system. It encounters ongoing issues and doesn’t integrate with modern communication, intercom, or safety systems. Teachers and staff need reliable communication channels to use during emergency situations. Modern communications technologies integrate with weather safety services, fire, emergency, and law enforcement tools, and even provide mobile lockdown solutions. The client understands this update is necessary to access modern services and integrations. Replacing the intercom system is part of their five-year plan to modernize technology and improve efficiency district-wide.

This project requires a high degree of collaboration across many departments, organizations, vendors, and other integrated services. The project will begin during the summer while there are no students present to prevent any safety issues that could arise with no intercom availability.

Industry:  
Education

### CDCT provided:

- Intercom system testing and evaluation
- Solution design for modern, integrated system
- Cabling services, including demo, installation, and speaker replacement/testing
- Configuration and installation of new gateway hardware, server, and software
- Training for client stakeholders on functionality and features of new system

### CDCT services:

- Consulting services
- System architecture and design
- Cabling services
- Deployment services

## The solution: A centralized, reconfigured, modernized system

Our team completed a comprehensive analysis of existing infrastructure. We've developed an integrated design that preserves existing resources and upgrades the entire system with the latest technological solutions. This system will rely on a centrally located server-based digital system. It will allow the client to leverage their existing WAN/LAN network and Cisco® Unified Communications Manager (Unified CM) to communicate between the server and each technology closet throughout the district. A Distribution Automation (DA) gateway will complete the technology.

The process will include replacing existing intercoms that support 300 speakers and horns, replacing cable to existing speakers, and adding new equipment where it's needed. A new server will be installed and VLAN configuration will be completed. The system will be configured to support mass notification and lockdown access via an integrated phone app. Then all equipment will be tested for proper functioning and clarity, and personnel training will be completed.

Once installation is completed at this location, the client intends to replace similar systems in all 22 independent school district locations.

## The benefits: Better emergency preparedness, with cost savings

An integrated system reduces disorder in a school's daily routine, synchronizes across campuses and school districts, lowers cost, and improves emergency management. Information sharing becomes streamlined and easy.

The new system will increase safety too. Students and teachers will be alerted immediately if threats are detected and the system integrates with fire safety systems, lockdown technology, and other safety features.

It will allow administrators to send pre-recorded messages through WAV files, text-to-speech, or live. The user-friendly software will allow for easy management and access to browser-based calendars, bell schedules, and emergencies.

Each campus will save roughly \$20,000 in intercom hardware costs. Office space will be reclaimed, as the new system's gateways will reside in technology closets, and the old central hub equipment will no longer be necessary. In addition, non-proprietary Valcom® intercom system hardware could be purchased through multiple vendors, providing long-term options for repair and replacement as needed.

### Benefits:

- Enhanced security and connectivity
- Elimination of outdated, faulty equipment
- Centralized control over intercom system
- Ability to integrate with modern optimized systems

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**~\$20,000**  
saved per school in  
hardware costs

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District savings of  
**~\$440,000**

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**Scalable across school  
campuses with minimal  
additional hardware**

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**App-controlled  
lockdown capabilities**

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**Modular equipment**  
is easier to repair and  
replace as needed



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