



CASE STUDY



Russell Sigler, Inc. | HVAC Distributor

ESCONDIDO UNION SCHOOL DISTRICT: SUSTAINABLE BUILDING MANAGEMENT

CARRIER TRUVU™ CONTROLLERS: A FAST AND RELIABLE SOLUTION

"We switched to Carrier's TruVu controllers because their ethernet-based communication is faster and more reliable than the wireless systems we used previously. Ethernet is already in place in our schools, making installation a breeze. We've had great success with TruVu at 12 sites and are expanding its use."

- Scott Mercer
Senior Controls Technician
Escondido USD



TruVu

Project Objectives

Escondido Union School District (EUSD) recognized an opportunity to enhance its educational facilities in North County San Diego by upgrading its building automation and controls system, and HVAC equipment.

EUSD's legacy Carrier Controls Network (CCN) systems, although reliable for over two decades, were beginning to show their age. Challenges with parts availability and limited integration capabilities with modern sensors and analytic tools were identified. Third-party wireless thermostats, while providing some wireless connectivity to the i-Vu system, were found to be less reliable than contemporary high-speed networks.

To enhance efficiency, extend the lifespan of the HVAC system, and support future growth, EUSD sought to implement a modern controls platform that could seamlessly integrate with their existing i-Vu® front end. Concurrently, EUSD chose to update the existing HVAC equipment as well to help provide more comfortable and healthy learning environments throughout the school district.

"We ensured the continued comfort for students and staff by upgrading to modern climate controls. New sensors and controller technologies allow for predictive analytics and advanced algorithms to optimize equipment efficiencies and detect anomalies."

- Scott Palchanis
Controls Sales Manager
Russell Sigler, Inc.

The Solution

The decision to upgrade to modern Carrier controls was influenced by the local Carrier Distributor, Russell Sigler, Inc. and the level of customer service they provide, the proven performance of the existing i-Vu system, and budgetary considerations. This choice also aligned with the district's focus on indoor air quality, energy management, and providing healthy learning environments.

To upgrade without disrupting the existing system, EUSD opted for Carrier TruVu dual IP controllers, a field-installable solution. These controllers, equipped with high-speed BACnet/IP connectivity, offer scalability and flexibility, accommodating future expansion while seamlessly integrating with the i-Vu front end. This provided facilities with a seamless experience without having to learn a new user interface. The district also secured the necessary materials to modernize the systems with approximately 500 pieces of HVAC equipment, mainly Carrier rooftop units, chillers and split systems.

The district also enhanced energy efficiency by installing door switches on exterior doors to reduce the HVAC operation while utilizing fresh outdoor air, and room-mounted occupancy sensors to shut down or reset the HVAC systems when no occupants are detected, optimizing comfort settings. This "like-for-like" upgrade provided a smooth transition for the maintenance and operations staff, minimizing disruption.



Synopsis

Serving over 14,000 students from kindergarten to eighth grade in San Diego, CA, EUSD aimed to modernize its building automation and controls system and upgrade their older HVAC equipment to help enhance occupant comfort, improve efficiency, and reduce costs.

During the planning and preparation phase, EUSD leveraged the California Multiple Award Schedules (CMAS) which allows state and local agencies the ability to efficiently procure building controls and HVAC materials directly from Russell Sigler, Inc. This streamlined process eliminated the need for a formal bidding process.

EUSD's facility staff successfully installed, programmed, and commissioned most of the new controls and HVAC equipment after receiving comprehensive training. This in-house effort resulted in significant cost savings compared to traditional procurement methods.

The upgraded system enhanced operational efficiency and reduced energy consumption through the implementation of Passive Infrared (PIR) sensors for occupancy detection, CO₂ sensors to provide the amount of fresh air required to maintain a healthy indoor environment, and door switches to reduce energy consumption if exterior doors are left open.

EUSD's decision to continue using the i-Vu front-end for the next decade ensures a smooth transition and supports long-term operational efficiency. The Carrier i-Vu building automation system offers the district flexibility in choosing technical support, training, service, and maintenance providers for their systems. Local support from Russell Sigler, Inc. and in-house EUSD staff ensures ongoing system performance.

Future plans include upgrading the remaining 300 controllers with the same Carrier TruVu product line, further enhancing the district's building automation system.

Project Summary

LOCATION: San Diego, California

PROJECT TYPE: Controls system upgrade

BUILDING SIZE: Various

FACILITY USAGE: K-12 Schools

OBJECTIVES: Provide safe, reliable comfort to students and staff; maximize energy efficiency and offer healthy learning environments; reduce operating costs

CONTROLS: Carrier i-Vu Building Automation System and TruVu Dual IP Controllers

MAJOR DECISION DRIVERS: Utilize existing i-Vu building automation system for long-term efficiency and ease of use

EQUIPMENT: Variety of Carrier chillers, rooftop units, and split systems

INSTALLATION DATE: Ongoing



For more information, contact your Carrier representative, call 1.800.CARRIER or visit carrier.com/commercial.

