



Indianapolis Public Schools, Indianapolis, Indiana



Indianapolis Public Schools (IPS) has an enrollment of over 32,000 students and 71 facilities across the school district. IPS offers more magnet and option programs than any other Indiana school system, and specializes in services to meet the needs of all children through vocational education training, alternative programming, and highly trained teachers who are sought after by school systems throughout Marion County.

The Challenge

IPS has undergone a major capital improvement project with a 15-year goal to improve comfort and ventilation in the majority of their school facilities. All projects require retrofitting facilities with building automation control systems that report back to the facilities department over the IPS Local Area Network.

LONMARK Associate member Davis Industries won system integrator bids on six projects including: Arsenal Tech West Gym, H.L. Harshman Middle School, Gambold Middle School, Joseph J. Bingham Elementary School, Christian Park Elementary School and Charity Dye Elementary School.

The Solution

Davis Industries delivered a full featured, open and interoperable Building Automation System (BAS) using LONMARK® certified Circon HVAC control products for Terminal Units, VAV systems, fan coil units, boilers and chillers. Advanced ventilation controls were installed in all classrooms with integrated IAQ sensing.

All HVAC controls were integrated onto a single, distributed network using LonWorks controllers from multiple vendors. The open system architecture facilitates future expansion and integration with other subsystems.

The Plexus Altitude Manager provides a central web server hosting graphics, schedule, alarming and trending for all sites. This sophisticated user interface provides unlimited user access through any Web browser on or off-site.

Each facility is connected through a secure LAN using either Echelon i.LON600s or Loytec LIP routers. Connectivity to the outside world allows IPS maintenance staff to monitor and control their facilities from anywhere in the world.

The Result

The fully integrated, open protocol BAS solution provided by Davis Industries made it possible for IPS to have a seamless and expandable network to control its major facility functions. While each project utilized various types of mechanical systems a common goal to provide adequate ventilation and comfort for occupancy comfort while maintaining energy efficiency was maintained. A measurement and verification system was installed as part of the building automation system, which monitored quantity of outdoor air, introduced to the space, CO2 levels and energy usage.

The Circon integrated building automation system allows for the selection of best of breed products that are monitored and controlled on a single network. Each facility is connected to the IPS LAN and a web server hosts the graphics, scheduling, trending and alarming for each site. Connectivity to the outside world allows IPS maintenance staff to monitor and control their facilities from anywhere in the world. Each site utilizes LonMark Certified devices commissioned using Circon's Network Integrator, an LNS based network management software tool. Multiple vendors products incorporated in each site include: Circon, Echelon, Honeywell, Trane, Carrier, Neurologic, Airtest and others.

System Components

- Circon Programmable HVAC Controllers
- Circon Terminal Unit Controllers
- Honeywell LonWorks Terminal Unit Controllers
- Echelon i.LON 600/Loytec LonWorks IP Routers
- Trane LonWorks Terminal Unit Controllers
- LonWorks Terminal Unit Controllers
- Plexus Altitude Web Server
- Airtest LonWorks IAQ Sensors

Contact:

Fraser Newton
Efficient Building Automation
Corporation (EBAC)
Tel: +1 604 248 4404
E-mail: ftn@circon.com



550 Meridian Avenue
San Jose, CA 95126, USA
Tel: +1 408-938-5266
www.lonmark.org