

K-12 Network Case Study by Waters Network Systems

Hart County Schools Hartwell, Georgia

High Schools: 1
 Middle/Junior High Schools: 1
 Alternative School: 1
 Elementary Schools: 3
 Preschool: 1

The Waters' Solution

Incorporating fiber zone cabling allowed the district to:

- ▶ Create an infrastructure that provides high bandwidth access for all users
- ▶ Reduce cost of network cabling
- ▶ Reduce cost of wiring closet electronics
- ▶ Prevent tampering of electronics in classrooms and labs with Waters' ProSwitch®-Secure classroom switches
- ▶ Implement a LAN infrastructure that is easy to manage at a cost the community can afford
- ▶ Upgrade to higher bandwidths by simply changing the electronics on both ends instead of rewiring the buildings

Hart worked with Richardson and Associates from Norcross, Georgia, to implement a LAN infrastructure that would provide network access to all buildings as well as create a solid platform for new technologies.

To explore how Waters can help your district maximize its technology resources, call 800.328.2275 for more information.

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WATERS NETWORK SYSTEMS
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“Long term cost of ownership has been reduced as a result of installing fiber to the classrooms”

Mike Hurley, Technology Director, Hart County School District



“All I need to do to upgrade to faster technologies is change out the ends as necessary to increase or manage the speed access to each location. Waters was the only manufacturer that provided a fiber uplink on a mini switch that was easily mountable and protected from outside access. I would implement this solution again in a heartbeat.”

Networking History

- 1996** Began Internet access using dial up modems through the local phone company. At this time, the seven schools did not have any type of LAN infrastructure.
- 1999** Installed wireless links between high school, middle school and one elementary school. Applied for Erate funds to wire schools with CAT5.
- 2000** Issued RFP under Erate for connectivity between all schools. Because Hart is a rural system, three of the four schools qualified for federal funds. Fiber WAN connectivity came in at \$350,000+ equipment to light it up. Wireless towers came in at \$105,000 total. Wired middle school using CAT5 with one MDF and two IDF's and installed wireless WAN.
- 2001** Held vote for local option sales tax to fund construction of three new elementary schools to replace five old buildings. Applied for Erate to fund fiber to classrooms instead of CAT5. After extensive research which included product evaluation, product comparisons and K-12 site visits, Hart chose Waters' switches for their fiber solution.
- 2002** Completed first two schools using Waters' switching solutions.
- 2004** Completed third elementary school using Waters' switching solutions.
- 2006** Based on the overall performance, cost of ownership and ROI using the Waters' fiber switching solutions, the new high school will continue to incorporate fiber based LAN connectivity to all classrooms. The flexibility of classroom switching has allowed Hart to easily upgrade to managed switches as needed. Using Waters' managed switches, energy management functions will soon be controlled with a VPN.
- 2007** Middle school previously wired with older CAT5 will be rewired with fiber to the classrooms. An additional VPN will be implemented to handle classroom fire exits and security cameras.

Analysis

Hart County is located 110 miles northeast of Atlanta, Georgia. Located on Lake Hartwell, Hart County is a home to a small rural mill town accessible from metropolitan areas in both Georgia and South Carolina. The Hart County school system provides educational opportunities for approximately 3,600 students in seven schools.

The flexibility in the classrooms provided by Waters' switches has provided all users with fast, reliable access to the Internet. Based on the rural location of Hart County, home Internet access is difficult. Because of this challenge, it became even more important to the school system that students had fast, reliable and flexible access to the Internet in every possible learning location. Classrooms have become a desirable environment used by students, teachers and the entire community for research and learning. Future plans call for extended availability to students and after hours availability to the community.

With fiber installed to every room in every building, any classroom or administration room can become a lab in the matter of seconds. All that is required to convert a classroom to a lab is to install a Waters' Secure classroom switch with a fiber uplink. The savings resulting from a totally fiber solution removed the annual costs to continually upgrade and maintain IDF's. Hart found that their original copper infrastructure with multiple MDF/IDF's was costly to install and difficult to maintain because each IDF contained additional equipment that caused numerous points of failure for the LAN.

Hart expects to achieve a significant energy savings by being able to centrally control classroom temperature with a VPN. Because Hart's LAN infrastructure is so solid, the implementation of environmental and security controls will have absolutely no effect on classroom connectivity.