

Strata CIX VoIP Business Communication System

Lightning Is No Foe for Toshiba VoIP System at Lake Highland Preparatory School

Founded in 1970, Lake Highland Preparatory School (LHPS) is an independent college preparatory school that educates 2,050 students in grades Pre-K through 12. Based in Orlando, Fla., the school's mission is to instill Christian values, inspire patriotism, develop future leaders, and prepare students for college and lifelong learning through academically challenging programs and affirming competitive experiences.

Focused on delivering an academic environment with a culture of love, concern and mutual respect, the school is located on a 26-acre campus on Lake

Highland in the heart of Orlando. It is accredited by the Florida Council of Independent Schools and the Southern Association of Colleges and Schools.

Florida is the lightning capital of the United States, and the school faced downtime of its telephone system nearly every summer when lightning hit and shorted-out the copper wiring that connects its buildings. To create a lightning-resistant system as well as prepare for future growth, LHPS turned to Authorized Toshiba Dealer Black Box Network Services of Orlando. Black Box has been an Authorized Toshiba Dealer for more than 25 years.



The Black Box team of Gary Abram, Chris Coyle and Jim Murphy with Carolyn Stewart of LHPS at the beautiful LHPS campus.



The Black Box Network Services team helps Carolyn Stewart of LHPS set up Toshiba eManager for remote management of the entire system.



Carolyn Stewart of LHPS and Jim Murphy of Black Box with the school's Toshiba Strata CIX VoIP system.

Mission: Create Lightning-Resistant VoIP System

Gary Abram, general manager, and Jim Murphy, sales engineer for Black Box Network Services, recommended that LHPS upgrade its older Toshiba Strata® DK424 system to a new Strata CIX™ VoIP system networked via their existing fiber optic network and, where possible, to replace the copper wiring between the school's on- and off-campus buildings with the objective of eliminating lightning-related outages of the phone system.

Carolyn Stewart, LHPS's technology manager, specified a robust, dependable VoIP system that would eliminate lightning-related downtime and handle the thousands of calls the school gets each week, improving the voice communications both internally and externally. Also important was that the system would allow expansion as the school continues to grow. Stewart also wanted a system that she could administer from her office. An affordable price, cost savings and a strong warranty rounded out the school's objectives.

Solution: Toshiba VoIP System Meets the School's Goals

Designed by Abram, Murphy and the Black Box Orlando team, the school's solution consists of two Strata CIX670 VoIP communication systems

for upper and lower school buildings on the main campus and an additional, totally IP-enabled CIX670 at the middle school campus 1.5 miles away. The school's business office, across the street from the main campus, is served by a Strata CIX100, with the other eight main campus locations solely using VoIP telephones. In addition, all 12 buildings are networked using Toshiba's Strata Net via IP over fiber, thus entirely eliminating the conductive copper path between the buildings. The system's 672 ports comprise 129 IP telephones, 182 digital telephones and 48 analog telephones. All users can call each other using four-digit extensions campus wide.

Stewart said, "We were so pleased with the reliability of our older Toshiba DK424 system that we chose Toshiba again; our new system also gave us a very cost-effective migration path and the ability to continue expanding as the school grows." In fact, the school is adding a performing arts center that will be connected to the system using IP telephones, providing a quick and economical communications solution that takes advantage of the existing IP network infrastructure.

Abram added, "Not only did the Toshiba system meet the school's goals, but by staying with Toshiba, we were able to migrate to the newer Toshiba Strata CIX platforms and reuse its digital telephones at a significant savings over buying an entirely new system."

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Result #1:

No Downtime Due to Lightning Strikes

By eliminating the conductive copper wiring between buildings and using VoIP over fiber, Black Box eliminated the downtime due to lightning strikes.

Stewart said, "In a school environment, it is very important to have our phones working at all times. We have thousands of calls each week, many from parents, and they need to feel confident that they can reach us, especially during big storms."

The fiber pathways between the school's buildings have proven completely lightning proof, according to Murphy. He said, "The primary goal of the system was to keep it live and eliminate the downtime. Going with VoIP over fiber accomplished this goal campus-wide."

Result #2:

In-House Admin With eManager

Using Toshiba's eManager®, Stewart has in-house administration capabilities of the entire system from her office. She said, "Using eManager, I can control adds, moves and changes as well as other administrative tasks for the phone systems in all 12 buildings. I can fix things quickly and easily without having to leave my desk."

The users also have the ability to program their own IP and digital desk phones. Murphy explained, "The LHPS users can control their own call handling and voice mail features from their own phones. It's intuitive, fast and easy for them to customize their phones to their own needs."

Result #3:

Easy-to-Use IP, Digital and Console Phones

Whether the school's users are on IP, digital or the PC attendant console telephones, they are easy to use and completely intuitive. "The IP phones have virtually all the features of the digital phones, so there are no sacrifices to use IP."

Stewart also appreciates the mobility of the IP phones. She said, "During the summer, our teachers can be reassigned to different rooms. Having IP phones means they can simply move their phones themselves without needing any help or a service call." The Toshiba IP phones work anywhere in the network or anywhere there is Internet coverage.

In addition, the school's receptionist uses Toshiba's PC Attendant console to handle incoming calls as a backup to the school's auto attendant. Using the PC attendant, she handles presence management and call processing more quickly and efficiently.

Result #4:

Toshiba Delivered the Best Price via Migration, Warranty, and Cost Savings

Migrating from their older Toshiba Strata DK system to the newer Strata CIX system and being able to reuse 182 digital phones and some of the system cards gave LHPS a cost savings of more than \$72,000 over buying a new system. Managing the system by using Toshiba's eManager also helped the school eliminate service charges, which when combined with the savings from the mobility of the IP phones (which eliminated service calls for adds, moves and changes) resulted in a total savings of about \$1,000 annually.

In addition, the new system has helped the school eliminate at least \$24,000 in lightning repair costs. By using IP, the school also saved nearly \$500 per month in unneeded phone lines. Toshiba also offered the longest warranty in the industry, seven years.

Stewart said, "Toshiba was unmatched in terms of pricing, ability to migrate our old system, future migration opportunities, warranty, and cost savings. The cost savings combined with the Toshiba products' unrivaled reliability and durability made it the absolute best choice for the school."



LHPS's Carolyn Stewart and Jim Murphy and Chris Coyle of Black Box with the school's Strata CIX VoIP system, which delivered a \$100,000 savings in the first two years and saved the school \$72,000 via migration.

Bottom Line:

Improved Efficiency, Extensive Cost Savings

Toshiba and Black Box delivered a voice communication system that exceeded the school's goals and has delivered on its objective of being lightning resistant. In fact, there has been absolutely no lightning damage and no system downtime since the system was installed.

Toshiba also delivered on the school's objectives of having a system that gave them administrative control using Toshiba's eManager. It also delivered many VoIP benefits, including eliminating the conductive copper connections as well as giving the benefits of IP phone mobility without service calls. In addition, centralized voice mail also helps improve internal and external communication. The system delivered cost savings of more than \$100,000 in the first two years and continues to deliver ongoing savings of \$7,000 annually.

Stewart said, "Together, Toshiba and Black Box have delivered on their promise of giving us a durable, reliable, cost-effective system that is lightning-resistant and reliable even in the most ferocious Florida summer weather."