

BELDEN

SENDING ALL THE RIGHT SIGNALS

Dell Seton Medical Center at The University of Texas

Embracing the Internet of Things, Dell Seton Medical Center at The University of Texas was looking for a partner that could provide cabling and connectivity to support its state-of-the-art technology for years to come.



The University of Texas at Austin
Dell Medical School

Our End-to-End Expertise
Your End-to-End Solution





Customer



As the centerpiece of a downtown health district in Austin, TX, Dell Seton Medical Center at The University of Texas is a brand new teaching hospital that supports medical education and collaboration among doctors, nurses, researchers, staff, students, patients and families. The health district anchors Austin's Innovation District, which aims to combine technology and health for improved outcomes.

The 544,000-square-foot, \$295 million LEED Gold hospital is also part of Ascension, the largest U.S. non-profit health system and the world's largest Catholic health system. The facility houses 211 beds, plus operating rooms and space for diagnostic and therapeutic support, along with space to add up to 135 more beds in the future. Dell Seton Medical Center at The University of Texas is also anticipated to be the region's only adult Level I Trauma Center.

The hospital utilizes state-of-the-art technology that improves patient comfort and healing, with the hope of revolutionizing how people get and stay healthy.





Challenge



Embracing the Internet of Things (IoT), Dell Seton Medical Center at The University of Texas needed cabling and connectivity solutions with a Power over Ethernet (PoE) component to support today's connected devices and high-performance technology, as well as the ability to support tomorrow's higher-wattage power and technology requirements.

For example, screens inside patient rooms connect wirelessly to employee badges; when a staff member enters a room, the ID badge information appears on the screen so the patient knows who he or she is. Upon discharge, a video is sent to the screen, sharing care instructions with patients before they leave.

Nearly everything inside the operating rooms is computerized and connected as well. Cameras inside overhead operating-room lights, for example, allow other trauma teams to watch surgeries remotely in real time.

High-resolution scans and MRI files needed to be transmitted back and forth quickly on the network without delay; the medical center also anticipated the need for increased streaming video capabilities in the future. With more research on the horizon, staff didn't want to be limited by the bandwidth of its cabling infrastructure. They also wanted a cable that wouldn't be impacted by nearby medical devices.

To keep the project on track, the medical center needed a partner that could provide onsite inspection work as the project progressed, and work side by side with other contractors.





Discovery



After learning about Belden's new Category 6A product line, Seton saw a number of advantages that met the needs of the hospital.

Seton has been a long-time Belden partner – ever since the DataTwist 350 Category 5e product was introduced back in the early 1990s. The medical center was also happy with Belden's Bonded-Pair cabling products as it migrated from Category 5e to Category 6.

After learning about Belden's new Category 6A product line, Seton saw a number of advantages that met the needs of the hospital. This included support for 100W PoE, a small diameter and the long-term Category 6A survivability associated with Bonded-Pair construction. In addition to the cabling, Seton was attracted to the 90-degree pair orientation of the Category 6A terminations.





Solution

As a hands-on partner, Belden was onsite to support the Dell Seton Medical Center at The University of Texas project from start to finish. Belden 10GXS Category 6A cables with Bonded-Pair technology and 10GX connectivity were used throughout the facility. The smaller-diameter cable helped reduce space requirements and overall cable weight, making it faster and easier to install while maximizing limited fill pathways.

The Bonded-Pair construction reassures the hospital that the cable will continue to perform despite the above-ceiling environment, which involved excess heat, difficult pulls and occasional drop lengths at maximum distances. 10GXS cables are the *only* small-diameter cable on the market proven to go the full 100 m channel without over-heating or performance degradation.

Cable Com, a Belden PartnerAlliance installer based in Austin, TX, was trained to install Belden

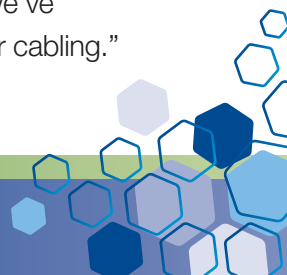
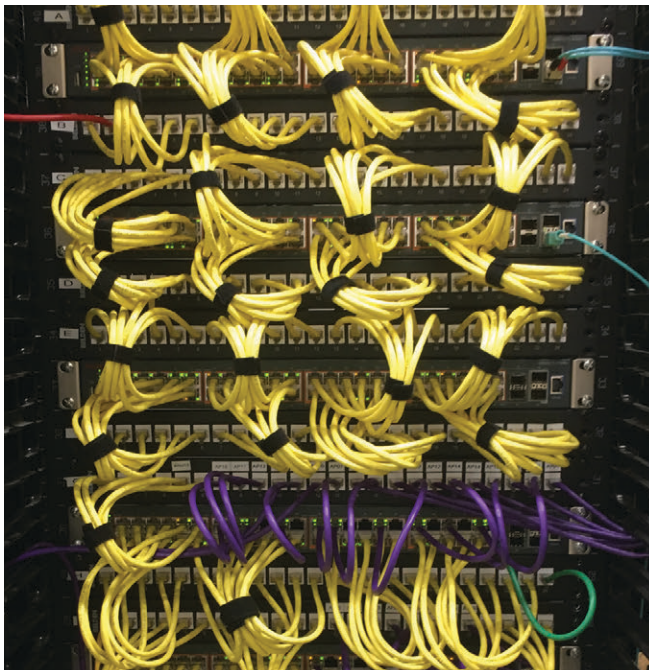
10GXS Category 6A cables quickly and correctly so Seton could be certain that the products would perform as promised.

“Belden’s on-time delivery and performance, combined with the fact that the cable passed with headroom margin on the first test attempt every time, kept everything running smoothly,” says Rolando Serrano, Cable Com project manager.

“We were very happy with how Belden juggled the demands of the medical center with the demands of The University of Texas – keeping everyone happy and delivering on time,” says Jimmy Small, business development manager for Cable Com.

Due to the success of this project, Belden 10GXS Category 6A cables and 10GX connectivity are now part of Seton’s standard.

“The above-ceiling environment of a hospital is very challenging for communications cabling. High temperatures, impact to our cable as maintenance, repair and upgrades are performed on the systems that reside above our cable trays; and removing abandoned cabling from cable trays all tax a cable’s ability maintain its original physical design and performance over time,” says David Niendick, information transport systems specialist at Ascension. “Our building infrastructure is built for the long run. It’s expected to support higher demands from the rapidly evolving technologies needed to care for patients today and in the future. The better we can keep all the cable’s components in their originally designed relationship to each other, the better we can maintain the cable’s performance. That’s why we’ve standardized on Belden’s Bonded-Pair cabling.”





Results

With PoE capabilities, the hospital can connect devices to the network with only one cable that carries data and power.

Dell Seton Medical Center at The University of Texas is set up for success with a high-performance cabling and connectivity solution that offers long-term ROI and allows building systems and devices to connect and communicate without any performance issues. The cables don't interfere with the performance of medical devices – and vice versa – allowing equipment and cabling to function as intended, even in close proximity to one another.

With PoE capabilities, the hospital can connect devices to the network with only one cable that carries data and power. In the future, as higher-wattage PoE becomes necessary to support equipment, the hospital will be ready to support 100W PoE without concerns about cable temperature rise or resulting poor performance.

By staying on target with promised delivery times, Belden kept the Dell Seton Medical Center at The University of Texas project on track so it could open for its first patients on May 21, 2017.



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