

# Connecting with Quality Health Care

## Penn Highlands DuBois takes patient care to a new level with Leviton copper and fiber network infrastructure.

Everyone at Penn Highlands DuBois takes pride in providing the best of advanced health care in the best of small town America. And it shows. Penn Highlands DuBois, formerly known as the Dubois Regional Medical Center, offers residents of west central Pennsylvania a rare combination of technologically advanced health care in a warm, friendly environment. Widely recognized as one of the leading health centers of its kind in the commonwealth, Penn Highlands DuBois is an oasis of clinical and technical excellence, with a focus on patient-centered care.

Selected as one of the top 100 hospitals nationwide by Solucient, a leading provider of health care information, Penn Highlands DuBois provides access to primary and specialty care health centers in seven communities, as well as operating cardiac, neurology, and orthopedic practices. From Hahne Regional Cancer Care to The Heart Center to the Neo-Natal Intensive Care Unit (NICU), Penn Highlands DuBois is known for exemplary care.

Naturally, the key to their patient-centered medical care is the people who examine, diagnose, monitor, and support patients, from nurses to doctors, admin to radiology, even billing and counseling. This level of care requires collaboration and communication, including quick, controlled access to patient information, supported by a state-of-the-art network.

For that network, Penn Highlands DuBois relies on a Leviton voice and data infrastructure. In fact, Leviton is the primary connectivity provider for the hospital and has been for many years, beginning with a large installation spanning more than a year and including well over 2000 drops. Two years later, the Heart Center was completed, again with Leviton. The latest expansion at Penn Highlands DuBois is the West Wing, a six-story 110,000 square foot building housing a pharmacy, obstetrics, NICU, and OR/cardiac catheterization suites, all supported by a Leviton copper and fiber infrastructure.



### At a Glance

- Profile:** Penn Highlands DuBois is known for exemplary patient care. This level of care requires collaboration and communication, including quick, controlled access to patient information, supported by a state-of-the-art network.
- Industry:** Healthcare
- Location:** United States
- Business Problem:** With limited space available, Penn Highlands DuBois needed a flexible voice and data infrastructure that provided increased accessibility while allowing for future expansions.
- Solution:** Leviton Angled Patch Panels with Versi-Duct® vertical front and rear cable managers.

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### Building an Invisible Network

According to Tom Johnson, Manager of Information Systems at Penn Highlands DuBois, “Doctors and nurses don’t care about copper, fiber, wireless, or any other system. The network should be invisible and completely mobile to them. The key is providing value, saving time, improving quality, and doing it cost effectively.”

In hospitals it’s not uncommon to get a call to move an entire group in minimal time. “I want to be able to say ‘sure, no problem’ and move them immediately,” said Tom. “That requires a standard system, ubiquitous and flexible enough to allow users to move freely about the facility, using any device they need, so they can focus on treating patients. That’s what makes us, as a department and a company, successful.” That’s why Penn Highlands DuBois continues to call on Leviton, for outstanding products and outstanding people.

Per Tom, Leviton Representative Steve Paes made the difference between a good installation and a great one. “Steve was an invaluable resource from the very beginning of the process, providing insight and training, as well as detailed knowledge of current products, TIA guidelines, and NEC codes. He made sure I had the information I needed to pick the best approach.”

Penn Highlands DuBois chose PTS (Premier Technology Systems), a Leviton Network Installer to build the infrastructure, including everything from voice and data, to nurse call equipment and access systems. Dave Brekosky, PTS Project Manager stated “We landed this job because we were totally into giving them what they wanted”. And Tom Johnson agrees: “Dave and his team, especially Project Foreman Dave Drum, were completely detail-oriented, decisive problem solvers. No matter what the situation, they consistently worked out problems in tough situations.”



*The new OR and cardiac catheterization suites are supported by Leviton copper and fiber systems, ensuring efficient transfer of critical patient data.*

### Taking a Ride in the Dust Dragon

What was the hardest part about adding a new section to an existing working hospital? Keeping it clean. When working construction in a hospital, everything has to be controlled, especially air. Patients with respiratory problems can’t be exposed to dust or fumes from the work site. That was one of the biggest challenges. Brekosky laughs and explains, “We had a special cart. We called it the Dust Dragon. HEPA controlled to meet FDA Infection Control Reduction Act requirements, the cart was always under negative pressure to ensure none of the dust would get into patient air spaces. It was always breathing in, and one of our guys was always on the inside (with the dust) doing the work.”

*“...It takes an efficient team, and one with more than a little patience to undertake such a project.”*

“Code enforcers were on the job site all the time,” said Drum. “But even if they hadn’t been there, we were really committed to controlling the dust. We pushed the Dust Dragon under the ceiling tiles of the area we were working on, sealed up, and just kept going. It takes an efficient team, and one with more than a little patience to undertake such a project.”

## Making the Network Flexible

The Leviton system is completely certified and carries a lifetime warranty. And it's highly flexible. For instance, the neo-natal intensive care unit (NICU) is one of the most advanced in the country, and at the same time, one of the most accessible to parents and caregivers. Network cables for voice and data run right to the headwall in the large open area, allowing for mobility and flexibility. Critical data from heart rate and blood gas monitors, ventilators, and other life-support systems all runs on the network. The tiny patients there can be monitored against pre-defined thresholds to immediately alert doctors and nurses to important changes, while still allowing their families to be close by.

Ultimately, the ubiquitous network allows information to be viewable from anywhere around the hospital and even remotely. 17-inch flat-panel monitors are used throughout the facility with larger screens and higher resolutions set up for specialized needs. Some images are 40 or 50 Meg, and there could be hundreds of them for just one record, so the infrastructure must offer maximum bandwidth and infinite reliability.

The network cabling is totally consistent, totally ubiquitous, never specific to phone, device, or even clinical equipment. Wherever there is a jack, users can plug in, and the jacks are virtually everywhere. A standardized system with VoIP phones makes it all easy to use and easy to configure.

## Working in Limited Space

Previous experience had taught Penn Highlands DuBois that they needed to allow for expansion. "It was key to put in as much capacity as possible", said Johnson. "We saw how quickly you can outgrow a space. We didn't want that to happen. We weren't given a lot of real estate for telecommunications closets, so we had to have the most space-conscious products around."

*"We were granted little space, but tasked with creating a leading-edge system with all the amenities and no compromises."*

Leviton Angled Patch Panels with Versi-Duct® vertical front and rear cable managers and funnels did the trick. "We were granted little space, but tasked with creating a leading-edge system with all the amenities and no compromises", said Brekosky. "We had to really consider the best optimization of racks, putting in everything we could think of, plus allowing space for growth." PTS installers found the angled panels easy to work with even in tight spaces because access was improved and made everything go faster.

The team also used Versi-Duct hinged covers, cable retainers, and slack loop organizers to keep the installation organized and accessible.

The six communications rooms are stacked, one on each floor directly above one another. Superior Essex 10G glass, 12-strand 50µm runs to each closet with 96-strand connecting buildings and a 24 strand redundant fiber loop. All Leviton fiber connectors, cabinets, panels, cable assemblies, and fan-out kits complete the backbone.

## Continuing the Commitment

Now the job is done. Penn Highlands DuBois is more committed than ever to helping their patients in every way they can, including providing the best voice and data infrastructure possible. The doctors and nurses there still don't pay much attention to the network, but that's just the way it should be. With a certified Leviton system, they don't have to.