



Case Study

WOODLANDS RETIREMENT COMMUNITY

DZS Passive Optical Lan Solution, FiberLAN, Supports Resident Care Woodlands

Woodlands Retirement Community in Huntington, West Virginia has always been at the forefront of senior care. Woodlands was the brainchild of Rev. Gray Hampton, a member of the Foster Foundation Board who introduced the idea of creating a continuing care retirement community (CCRC) to his board in 1985. The goal was to expand the scope of their current retirement home, Foster Memorial Care. In 1996, Woodlands Retirement Community opened with 111 apartments that offered what was at the time considered unique: multi-tiered retirement dwellings. Woodlands has both independent and assisted living options for residents. Independent Living allows residents to live as they please, but without the responsibility of home maintenance. These residents have access to healthcare and other amenities and can choose from a variety of apartment floorplan options.

Assisted living at Woodlands includes a private room and a 24-hour emergency response system.

RECOGNIZING BANDWIDTH AND TECHNOLOGY NEEDS FOR A LARGE, GROWING PROPERTY

Today, Woodlands continues to expand, serving more than 500 residents in more than 250 single- and multi-person units. But Woodlands hasn't continued to grow on merit alone. Woodlands understands that staying current in today's competitive Commission on Rehabilitation Counselor Certification market means keeping up with and – in Woodlands' case – exceeding expectations for the quality of available

on-site amenities. To do so, Woodlands implemented Healthsense eCall™ technology in their facilities to benefit assisted and independent living residents. The eCall™ service includes an emergency and nurse call system; locator technology; and time-stamped records and data reports for quality care assurance. Healthsense pendants are also used by some Woodlands residents, which signal caregivers for urgent needs. The Healthsense eCall™ services are reliant on the facility's Internet network. With the amount of residents, patients and medical information to support and secure, Woodlands needed an Internet network with robust bandwidth that could support the safety services and health information essential to patient care, as well as the communications needs of the residential community.

PLANNING THE EXECUTION OF NEW TECHNOLOGY IN AN EXISTING INFRASTRUCTURE

In 2013, the executive team, led by Chief Executive Officer Larry Mabry, completed a competitive analysis to assess the best technology to execute their infrastructure upgrade plan. The technology had to support 500+ residents with Wi-Fi-enabled Internet, and the behind-the-scenes patient management systems from Healthsense. Resident care was also an integral aspect of the overall project. Mabry brought in a Technology Director, Richard Eid, a seasoned professor with more than 30 years' experience in Network Maintenance and Design. Eid collaborated with the executive team and oversaw the installation and implementation of the project. To manage the process and help identify a technology solution, Woodlands reached out to Qypsys, a leader in the design and deployment of advanced technology platforms.

The Challenge

- Implement a high-speed, large-scale network that can scale to match the community's rapid growth rate.
- A network bandwidth that can support electronic health records, Healthsense services, and Internet, phone and video access for all residents in the assisted and independent living quarters.

Solution

- Deploy DZS FiberLAN solution throughout the entire 252-unit, 171-acre campus.
- Implement using both existing cable and updated fiber cabling to reduce footprint and increase bandwidth.
- Utilize DZS MXK-319 terabit access platform to create a scalable high-bandwidth network. One FiberLAN MXK-319 can support up to 14,336 end users.
- Employ DZS Optical Network Terminal. More than 300 of DZS ZNID-GPON-2425A-NA ONTs were installed in each residential unit at Woodlands to support voice, data, Wi-Fi and video streaming services.

Benefits

- Care professionals are able to monitor both the health and the whereabouts of the 500+ residents from secure access points throughout the property.
- Residents have high-speed Internet access, ensuring connection to their family and friends 24/7.
- Woodlands IT personnel have a long-term networking solution that can easily be expanded concurrent with the growth of the campus.
- Low disruption during installation – 45 minutes per living quarter.
- Reliable, live network with downtime of six minutes or less per year.



"The Woodlands project was especially challenging because of the sheer size of the property and the multiple stages of project implementation," said Alan Bertsch, President, Qypsys and team lead on the Woodlands project. "We also wanted to ensure economies of scale, as the Woodlands property had grown rapidly, and would only continue to do so."

Qypsys examined the scope of the project, breaking it down into steps after identifying the customer's needs. The objective was to recommend a solution that would support both short- and long-term goals while scheduling a deployment model that would be the least disruptive to the residents and staff as possible.

Qypsys recommended deploying a Passive Optical LAN (POL) solution, which is a robust, energy-efficient network that reduces operating costs and infrastructure complexity. A POL allows companies to meet increasing bandwidth demand while saving space and improving the longevity of the infrastructure. The DZS intelligent terabit access platform (MXK-319) used at Woodlands can support up to 14,336 end users. Because of the bandwidth needed for the property size, the POL solution Qypsys recommended was an efficient solution for the Woodlands facility.

Once the benefits of a POL were established, Qypsys recommended DZS FiberLAN solution, a next-generation Optical LAN solution built entirely on industry leading standards. FiberLAN is a high-performance solution that delivers high-speed data, voice and video to multi-level, multi-unit infrastructure models. This fully converged solution is scalable for a single or multi-level buildings, or large campus environments where customers are installing new facilities or upgrading their current LAN infrastructures. The FiberLAN solution also has a low downtime of only six minutes per year, a tremendous advantage in an

environment where the reliable exchange of patient information is key to their well-being.

IMPLEMENTING DZS POL SOLUTION AND HARDWARE INTO RESIDENT UNITS

"I've worked with Fiber installations, but never a POL. The solution recommended by QYPSYS matched what we were attempting to accomplish, both now and in the future," said Eid. "DZS POL solution, FiberLAN, exceeded our goals of improving energy efficiency while their expertise in the area allowed a minimum of disruption to our residents and staff, which was an essential component of our overall plan."

DZS hardware that supported the delivery of voice, video and Internet was installed in individual rooms or apartments and were installed within 45 minutes per location. "Due to the sheer size of our facility and campus, a FiberLAN was the best alternative to copper-based LANs available today," says Eid. "Not only is it cost effective, but its efficiency and environmental friendliness make it an attractive option for large-scale deployment. But what really won us over at the end of the day is the ability of DZS FiberLAN suite to expand and adapt over time as Woodlands continues to grow, and grow we will."

Contact DZS to request a customized assessment identifying how a Passive Optical LAN (POL) can reduce operational investments, increase energy efficiency and reduce storage space for your next project



"The FiberLAN solution has fit in well with our existing infrastructure, and gives us a new platform on which to continue to build in the future. In addition, we are extremely pleased that we can now offer wireless services to our residents for free," Eid adds. "They have commented continually about how fast their new internet connection is, which is satisfying because our sole purpose is to take care of our residents and this has been an exceptional addition to the quality for them."



DZS Inc. (NSDQ: DZSI) is a global leader of access, optical and cloud-controlled software defined solutions. Our software and network innovations are empowering communications service providers to reimagine their EDGE and transform their businesses and network infrastructure to become the experience providers of tomorrow. **DZS** systems, platforms and services are leveraged by over 400 service providers globally in over 70 countries and connect to over 70 million homes and businesses and are relied upon by more than 30 of the world's top 50 telecom providers.

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