

CASE STUDY

At the Height of a Pandemic, CBRS Proves to be a Game Changer

A new CBRS broadband solution was deployed in Montour County, Pennsylvania, to bring reliable non-line-of-sight connectivity to the community.





Image source: [Geisinger.org](https://www.geisinger.org)

This was a collaborative project between DRIVE, an Economic Development Entity, and regional healthcare provider [Geisinger](https://www.geisinger.org), who funded the project. DRIVE engaged [Conxx](https://www.conxx.com) in the early stages of the pandemic to bring connectivity to the county by deploying [BLiNQ Networks](https://www.blinqnetworks.com)' CBRS certified hardware to deliver fast, cost-efficient installation and non-line-of-sight capabilities.

Challenges:

Pre-pandemic, there was already a strong need for reliable connectivity in Montour County, with the terrain alone and lush tree cover presenting some challenges with line-of-sight last mile technology. Due to the necessity of getting county residents online for work, school, and the reception of telemedicine, time to market was a huge factor in the decision-making process. It was necessary to find a solution that could be quickly and easily deployed.

"We had been exploring with Conxx the availability and cost to add CBRS to our network prior to the coronavirus outbreak. With the jump in remote workers in early March, we had an urgency and Conxx was able to bring CBRS online in three weeks," said Jennifer Wakeman, Executive Director of DRIVE.

DRIVE's existing wireless network can provide fiber speeds to areas that do not currently have adequate access to broadband service, and it's becoming clear that more areas outside of Montour County could benefit from a similar service.

Pennsylvania has seen a surge in the need for telemedicine. As a result, leveraging a working partnership with the county's flagship rural healthcare provider, Geisinger, became vitally important in mid-March of 2020. Both employees and funds were deployed across a number of hospital departments to solve the challenge of getting technology into the hands of people that don't already have it in their homes, such as providing tablets to senior citizens. But a weak link in the approach was evident where residents didn't have home access to internet service.



Solution:

Deploying a Private LTE Network utilizing the CBRS band is a game changer, allowing for network expansion into more rural, forested areas of Montour County. The technology engineered and deployed by Conxx was the CBRS certified FW-300i, supplied by BLiNQ Networks. The [OnGo Certified](#) FW-300i is a single piece of hardware that offers exceptional network capacity in a compact, lightweight design with integrated built-in antennas. Two [FW-300i units](#) can offer 360 degree coverage, ready for CBRS deployment.

“We learned a lot with our initial build out and were able to provide carrier-grade service to locations that could not be served by traditional line-of-sight gear,” said Conxx lead field technician Alan Wright. **“The price point, technical support by the distributor, and self-contained LTE technology made BLiNQ a smart call for a cost-effective, timely and reliable rural solution!”**

DRIVE owns and maintains core network infrastructure which is large enough to cover a substantial portion of the county, including unserved areas in the north. The DRIVE Network is fed by a fiber-optic backbone, and utilizes point-to-point microwave and millimeter wave in order to connect the 'last mile' wireless base stations. The initial pieces of hardware can be found on a county 9-1-1 tower, at the Montour County Emergency Management Agency building, atop Geisinger's Hospital for Advanced Medicine, and on an exhaust stack at US Gypsum in Washingtonville. To ensure reliability, the DRIVE network is professionally monitored 24/7.

As of today, five counties in Pennsylvania have committed to funding broadband technology and that number is expected to grow. **“We are constantly looking at options to expand our service into underserved areas in Columbia County and several counties that have expressed an interest in joining DRIVE and becoming network users,”** said Wakeman in a press release.



Results:

Wakeman confirms that the line of sight issues initially experienced were alleviated upon the deployment of the new technology. She says **“adding BLiNQ to our network absolutely resolved line of sight issues. Our primary ISP, SkyPacket, was able to go back to residents who requested service via our line-of-sight technology, but were unable to be served. They are now utilizing our network because BLiNQ reduced the impact of trees and other obstructions.”**

The Conxx broadband wireless network has the capacity to cater to home office set-ups, home education and telehealth services. In keeping with the CRF timeline, rolling this out at the height of the COVID-19 pandemic was a priority.

Due to the positive change broadband has brought to Montour County, there has been an increasing demand for its educational sector to have connectivity as Fall draws closer and plans are being made.

Counties and commissioners have been very cooperative with CBRS, allowing access to the 9-1-1 towers for the purpose of placing BLiNQ’s hardware. The governor has also implemented the Office of Broadband Initiatives to provide further support for expansion in Pennsylvania.

As a direct result of the success thus far, county commissioners are looking to further spread this initiative to other counties and businesses in the agricultural sector. In order for this to work, continued innovation and collaboration by all parties is essential.

Moving forward, there will be more of a reliance on CBRS to deliver broadband signals where needed in an economical and expeditious way. With potential access to some CARES Act funding, the intention is that broadband core network expansion will be led by county commissioners, and WISPs will continue working to implement technology on the ground. Simultaneously, stakeholders are working together to understand when more bandwidth will be needed.

Additional resources:

[WISPs and Counties: a Profitable Partnership](#)
[CBRS Alliance](#)
[SkyPacket](#)
[Conxx](#)

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