



# **CASE STUDY: SCHOOL DISTRICT BRINGS THE CLASSROOM HOME FOR ALL STUDENTS**

**Bridging the Digital Divide with Nitro™ Private LTE**





## PITTSBURG COMMUNITY SCHOOLS BRIDGE THE DIGITAL DIVIDE WITH NITRO™ PRIVATE LTE

With almost 3,100 students in its school district, Pittsburg Community Schools in southeast Kansas faced a significant challenge last year in response to the coronavirus pandemic. Already concerned about the “digital divide” separating students without reliable internet access from their peers, the district and the City of Pittsburg sought to ensure that all students in their schools could get stable, secure connections in order to access online classes, stream video, and participate in key educational programming.

Like many public school districts, Pittsburg had previously lacked the resources to achieve its longstanding goal of providing reliable internet access for all its students. With pandemic-related funding, however, Pittsburg was able to deploy Motorola’s Nitro™ private LTE solution to deliver high-speed broadband within the school district and gain greater network security at the same time. Today, Pittsburg has made large strides in bridging the digital divide while also gaining critical future capability to improve network capacity, interoperability, and security.

### CUSTOMER PROFILE

- Pittsburg Community Schools
- Unified School District 250
- Pittsburg, KS
- 3,100 Students
- 6 Campuses

### TECHNOLOGY

- Nitro™ Private LTE solution

### OUTCOMES

- Quickly adding high-speed broadband in underserved communities levels the playing field for students
- On-Campus LTE offers future capabilities for security, reliability and interoperability



# THE CHALLENGE

## **Abrupt Pivot to Remote Learning Created Immediate Need for Reliable Student Internet Access.**

When schools transitioned to virtual instruction nationwide at the start of the pandemic, Pittsburg Community Schools needed to support hundreds of underserved students who lacked reliable internet connections at home and couldn't access remote learning materials. Initially, staff supported those students by copying and distributing printed materials—but a better long-term solution was clearly needed-- and quickly.

Some wireless solutions were readily available, but each had drawbacks. Mi-Fi hotspots were too expensive for many families, long-range Wi-Fi could be unreliable, and modems in parked buses were inconvenient and disruptive, requiring students to work nearby, either outside or in parked cars, often in inclement weather.

During the first days of the pivot to remote learning, Pittsburg school officials, like those around the country, were left scrambling for a solution. Pittsburg needed a solution it could deploy quickly, ideally one that could leverage the city's existing investment in fiber. Pittsburg officials sought to create cost-effective and widespread community access to reliable internet connectivity to address both the immediate challenge of remote learning and the district's long-term goal of leveling the playing field so all students have the same, immediate access to educational services.

## **A Long-Term Investment in a Solution That Can Evolve as Needs Change**

The reality is that the digital divide is likely to widen without thoughtful long-term planning and intervention. For that reason, Pittsburg sought a solution that would support new teaching and learning modalities in the future.

Pittsburg also wanted versatile technology that had the capability of supporting technologies on campus in addition to distance learning, such as security technology. While these capabilities were not currently needed, it was important to invest in technology that gave school officials maximum future flexibility.

**20%** of our kids

"We quickly found that about 20 percent of our kids didn't have good quality internet access. So, our ultimate goal was, 'How do we figure out a way to get kids connected?' And that's what started the conversation and us dreaming about what it would look like to be able to get kids really good quality internet access at a very low cost—or in this case, no cost at all."

**– Brad Hanson**  
*Assistant Superintendent*  
Unified School District 250  
Pittsburg, KS





## **SOLUTION:** **MOTOROLA** **SOLUTIONS'** **NITRO™** **PRIVATE LTE**

With its objectives clear and time of the essence, the city of Pittsburg and USD250 concluded that they needed a secure, reliable, private network that would be easy to deploy without the need to install complex infrastructure. They wanted an end-to-end solution with the benefits of LTE technology—including mobility, quality service, and extended range and capacity—combined with the simplicity of Wi-Fi architecture. They also needed reliable outdoor coverage, consistent availability, greater data security, and better data-streaming capability with custom coverage and network control.

Ultimately, they chose **Motorola Solutions' Nitro™ private LTE** to quickly help hundreds of their students remotely access learning resources.

Pittsburg mapped out where their neediest students lived, based on their eligibility for free or reduced lunch. Then, they identified the best public sites in town for six antenna installations. Network deployment was completed in just 40 days.

"Now we have home connection devices that can reach approximately 500 households and around 1,000 students. That gives us room to grow as we move forward."

— **Brad Hanson**  
*Assistant Superintendent*  
Unified School District 250  
Pittsburg, KS

# OUTCOMES

## High-Speed Broadband in Underserved Communities Levels the Playing Field for Students

When Pittsburg students resumed online learning, the new network, named DragonNet, was made available at no cost for families in need. For the first time, these students were able to successfully stream classes, access digital learning platforms, watch educational videos and connect with teachers and classmates in real time.

The district's schools are connected to the LTE network using Pittsburg's existing fiber optic cables. The school district owns and manages the laptops, routers and modems they've provided to students, so it's able to control network access as well as the content that students are able to consume.

At the same time, the solution's hosted core means that day-to-day maintenance, security, network monitoring, and all updates are managed as a service, ensuring Pittsburg has zero network downtime while freeing them of the need to hire dedicated LTE core engineers. "We set DragonNet up so only our devices connect to it, so it's strictly for educational purposes," said Hanson. "But it's truly exciting for our kids that did not have the opportunity before like their peers."



## On-Campus LTE Offers Future Capabilities for Security, Reliability and Interoperability

Besides remote learning, Pittsburg has the flexibility for other potential future broadband capabilities such as expanding its use for on-campus purposes.

By gaining a high-capacity, campus-wide private network with a reliable connection and device interoperability, the district has the ability to bolster on-campus network access or add additional security systems for a unified on-campus security solution—including live video camera feeds, access control, license plate recognition, and push-to-talk devices.

"Now we have home connection devices that can reach approximately 500 households and around 1,000 students. That gives us room to grow as we move forward."

— **Brad Hanson**

*Assistant Superintendent*  
Unified School District 250  
Pittsburg, KS





Motorola Solutions and MiCTA have formed a partnership that will make it more convenient and affordable for MiCTA's members to purchase Motorola Solutions' Nitro™ private LTE solution. MiCTA helps thousands of non-profit organizations from higher education, K-12, healthcare, library, government and charitable sectors procure the best technology and most favorable pricing through a highly competitive request for proposals (RFP) process.

[Click here to learn more about joining MiCTA.](#)

## THE NITRO NETWORK: HIGH-SPEED INTERNET FOR TODAY'S NEEDS AND TOMORROW'S CHALLENGES

Today, the city of Pittsburg and its school district have vastly improved learning access and opportunities for their most underserved students. With their move to private LTE, the city and school district are taking critical and proactive steps to help underserved communities get the connectivity and educational resources they need. By deploying high-speed broadband, Pittsburg is also building a strong foundation for future improvements and capabilities. They've invested in a solution that can grow with them in the future and serve other critical purposes within the school system and city, from additional device connectivity to additional security solutions.

"Our goal is to level the playing field, and that's what we're doing here."

**— Brad Hanson**  
*Assistant Superintendent*  
Unified School District 250  
Pittsburg, KS

To learn more and explore our Nitro network, visit the Nitro website at [www.motorolasolutions.com/nitro](http://www.motorolasolutions.com/nitro)



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