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The Connected Bus

A Complete Guide to Implementing
School Bus WiFi in Your District

Overview

To bridge the digital divide and make it easier for students without Internet access at home to keep up with their peers and enjoy better access to learning material and other resources outside school, many school districts have outfitted school buses with WiFi.

Here we talk about the benefits of this technology and how you can roll out a school bus WiFi program in your district.



Key Points Addressed

1. The Digital Divide in K-12
2. Extending the Classroom to the School Bus
3. Benefits of School Bus WiFi
4. Getting Started with School Bus WiFi

The Digital Divide in K-12

Internet access at home has a significant impact on the ability of K-12 students to learn at home, complete assignments, and understand course content.

[Various studies](#) have found that students with regular, unobstructed Internet access outside the classroom perform better than students without, and these same studies have found that an estimated nine million children lack Internet connectivity *of any kind* at home.

Amongst those who do have some level of connectivity, there are additional issues and obstacles to learning that many children face, from data caps and poor connectivity to cost issues, poor supervision, distraction, and limited tech literacy – amongst students and parents alike.

School bus WiFi is one way in which school districts can support students – especially those with limited Internet access at home – to provide them with additional time to complete online assignments and access additional learning resources.



12 Million

K-12 students lacking reliable internet access at home
([Common Sense Media, 2021](#))

60%

Of eighth-graders rely on the Internet at home to complete homework assignments.

65%

Of suburban school students use the Internet for homework every day or almost every day.

1/7

U.S. homes with school-going children do not have high-speed Internet at home.



58% for children who attend city schools.



50% of children who attend rural schools.



44% for children who attend schools in towns.

[Pew Research, 2020](#)

Extending the Classroom to the School Bus

There are half a million school buses in the United States that transport 26 million students each day in the U.S.

According to [EdChoice](#), students spend an average of 24.3 minutes traveling one-way on a school bus each day. This adds up to 146 hours or 24 school days per year.

The takeaway from these figures – and the opportunity at hand – are clear. Too many students lack reliable connectivity at home, but they spend enough time commuting to and from school for us to meaningfully help them catch up where they may be falling behind. **That is where school bus WiFi can make an impact.**

School bus WiFi can also provide connectivity for more than just daily routes. Students can also benefit from having access to WiFi on athletic and activity buses, and while traveling to and from field trips. Plus, districts can provide connectivity at student homes by parking WiFi-equipped buses at strategic locations throughout disconnected communities to create community WiFi hotspots.



48.6 Minutes

is the average amount of time students spend round-trip each day on the bus. ([EdChoice, 2020](#))

Time Spent on the School Bus



About **26 million students** ride a yellow bus to school every day.



Buses provide an estimated **10 billion** student rides every year.



Students spend an average of **140 hours** traveling on daily routes each academic year.



Rural riders have longer commute times than city and suburban riders.



District Success Story: Farmington Municipal Schools

Find out how Farmington Municipal Schools, a rural New Mexico district located on Native Navajo lands, helped students with commutes as long as 90 minutes each way to and from school rack up to 900 hours of learning using buses fitted with WiFi connectivity.

[Read the full case study here →](#)

Benefits of School Bus WiFi

Here are a few ways in which students, drivers, educators, and district leaders can benefit from WiFi-equipped school buses.



Extend learning time by providing students with access to learning material, classes, educational apps and websites, and other resources needed for assignments and projects while they commute to and from school.



Many districts with on-board WiFi have reported that connectivity on the bus has **helped many students finish homework** when they used to struggle to do so.



Reduce behavioral incidents on the bus. Many school districts have reported a **fall in disciplinary referrals** on buses with WiFi.



Being able to work or study on the bus can **help students stay on top of their schoolwork despite being overbooked with extracurriculars and other activities.**



Improve driver retention. When students are engaged on the bus, it allows drivers to focus on the road, making their job easier.



Enjoy lower plan costs per student compared to at-home connectivity or individual WiFi hotspots.



District Success Story: Raytown School District

Find out how Raytown School District provided WiFi for students on their daily commutes while also **reducing the number of behavioral incidents on the bus by 45% during their pilot program.** This not only created a safer and more positive ride home for students and drivers, it also saved administrators hours of work processing referrals and contacting families.

"I was not surprised to see that when kids are busy and have something to work on, they'll stay out of trouble. I was shocked at the anecdotal and data reports of how much better it was, though. I wasn't expecting those kinds of numbers."

Kevin Easley, Director of Transportation, Raytown School District

[Read the full case study here →](#)

Getting Started with School Bus WiFi

Here are important areas to consider as you roll out your school bus WiFi initiative:

Establishing the 'Why'

Identify the most critical gaps you need to address and show how WiFi bus connectivity can address those issues. This includes an assessment of when, where, and how bus WiFi will help during student commutes and how bus hotspots can be used in the community to provide Internet access to disconnected students at home.

Assembling Your Team

Before you can equip your buses with WiFi, you must determine whether you have the access – and permission – needed to do so from key stakeholders - this includes the superintendent, school board, transportation department, and technology department. Once approvals are in place, the technology and transportation team should work closely to develop the launch plan and train all drivers, bus maintenance staff, and IT staff that will be imperative for program success.

Questions to Ask Before Equipping Your Buses with WiFi

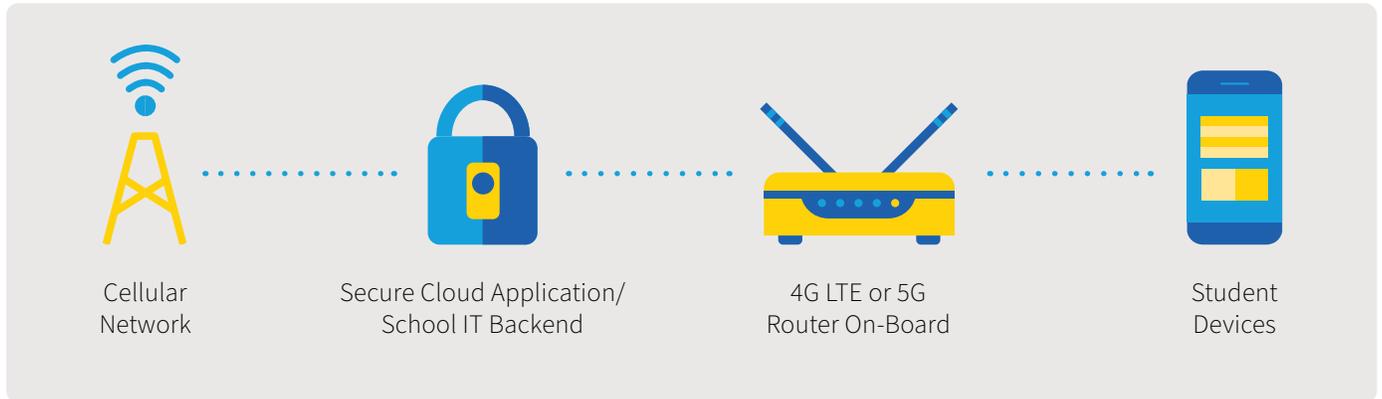
1. How many buses need connectivity?
2. Are your buses leased or owned by the district?
3. Will you be installing your routers on the bus or using portable router kits?
4. Which cellular networks get the best coverage in your area?
5. How will web filters be implemented to ensure CIPA-compliance?
6. Will student devices automatically connect or will students need to enter a password?
7. What type of data plan do you need?



Kajeet SmartBus™ is a turn-key school bus WiFi solution. Our dedicated support team will walk you through the process and help answer any questions. **Learn more at kajeet.com.**

How It Works

At the most basic level, bus WiFi infrastructure delivers connectivity as follows:



What to Look for in a Robust WiFi Solution

- Mobile and cellular data communications technologies such as **4G LTE, 5G, and WiFi connectivity** that are handled at the router level.
- **Cloud management** applications/user dashboards and integration with the school IT backend.
- **Secure gateway devices** with customizable levels of authentication, authorization, and encryption that ensure student safety.
- **Ruggedized routers** that can withstand harsh environmental changes and the vibrations and movement that come with bus travel.
- **Carrier diversity** for reliable connectivity across your entire school district where coverage may vary.
- **GPS** for tracking, location-based statistics, and reporting.



External antennas to boost signal strength.



Example of a ruggedized router.

Final Thoughts

Every school district faces unique learning challenges and resource limitations, but solutions such as school bus WiFi can be used to address some of the most pressing challenges that district leaders face when it comes to:

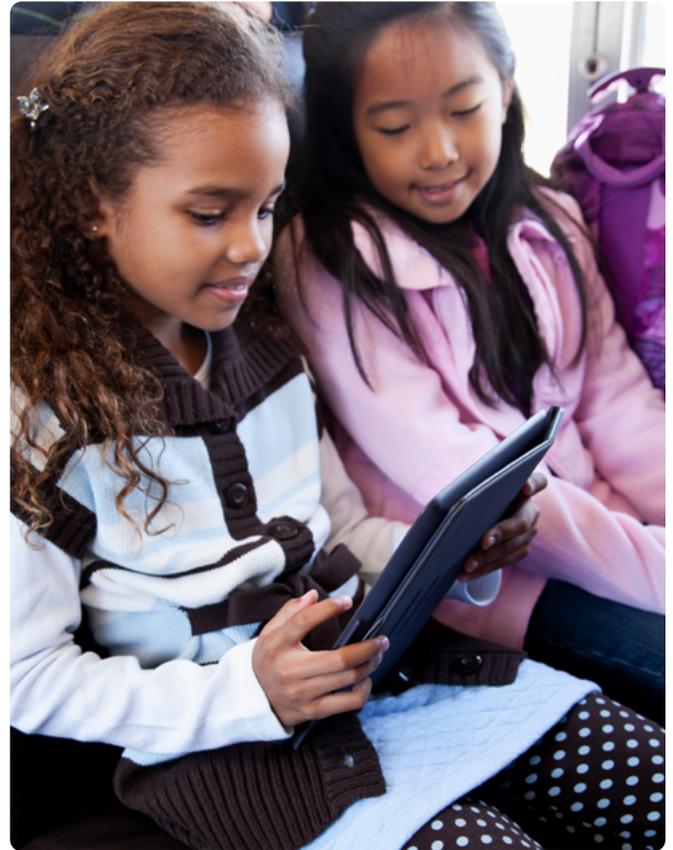
- Increasing digital equity for students
- Improving bus driver retention
- Decreasing behavior incidents on the bus
- Creating a safer ride for both students and drivers

This technology can be used to connect students in any mobile environment, such as on long daily commutes, athletic buses, activity vehicles, and maker buses - making it a versatile and cost-effective solution for districts.

Kajeet SmartBus™

Kajeet is the #1 provider of school bus WiFi in the U.S. and Canada. Our SmartBus WiFi solution includes everything district leaders need to quickly equip their buses with connectivity for students.

- CIPA-compliant web filters
- Unlimited data plans
- Connectivity on the network(s) of your choice
- Hard-install and portable kit options
- Dedicated support for the lifetime of your program



Learn more about Kajeet SmartBus™

Visit kajeet.com or contact us at tellus@kajeet.com

About Kajeet

Kajeet is trusted by over 2,500 schools and districts across North America to provide safe and reliable connectivity for students outside the classroom. Our full suite of wireless solutions includes WiFi hotspots, school bus WiFi, private networks, and more.

Founded by a group of dads in 2003, Kajeet is committed to closing the digital divide for students, also known as the Homework Gap. Our mission is to ensure every student is able to access the online resources they need to be successful in school and beyond.