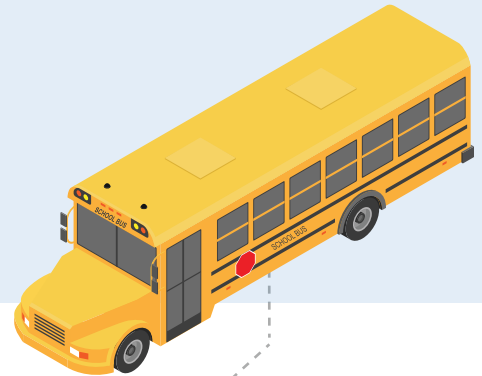


Solution Brief | School Bus Connectivity

Public schools face unique challenges in managing their school bus fleets, with safety and operational efficiency being top priorities. Reliable, long-range mobile networking solutions are crucial for providing real-time visibility into fleet operations, including tracking CAD/AVL/GPS data, monitoring video feeds, and ensuring CIPA-compliant Wi-Fi access for students. The hardware deployed must efficiently prioritize and segregate these functions to maintain seamless data connectivity where it's needed most. At MCA, we specialize in delivering 5G solutions that meet the specific demands of educational institutions, ensuring safety, reliability, and compliance across the entire fleet.



Business Needs | [Upgrading Fleet Connectivity](#)

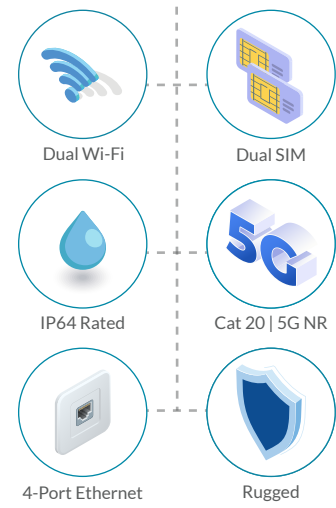
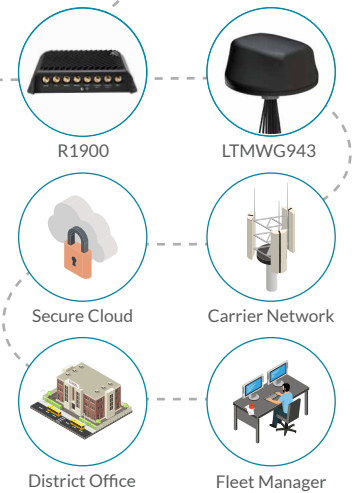
Many school district fleets still rely on legacy Computer-Aided Dispatch (CAD) and Automatic Vehicle Location (AVL) systems built on outdated analog radio networks. Whether districts own their radio towers or lease them from city or county governments, expanding and upgrading these systems can be costly. In many cases, school bus fleets require a complete overhaul to implement modern, reliable, and cost-effective communication solutions that can deliver the real-time data needed for fleet management and student safety.

Solutions Provided | [Purpose-Built Cellular Hardware](#)

To effectively connect internal and external systems and devices, school districts require a rugged, secure, and reliable communications infrastructure for mobile data exchange. The MCA cellular networking team is uniquely positioned to deliver these solutions. Our engineers configure and install purpose-built 5G router and antenna kits specifically designed for school buses and transit vehicles. We leverage equipment from trusted partners like those featured herein, and others, ensuring top-tier performance.

Wireless Routers | [Ericsson R1900 Mobile Router](#)

Ideal for both urban and rural school districts, the Ericsson Cradlepoint R1900 is a Cat 20 and 5G router built for rugged, in-vehicle networking. Equipped with GPS functionality, it offers reliable real-time connectivity to CAD systems, AVL data, camera feeds, and CIPA-compliant student Wi-Fi access. Paired with Ericsson's NetCloud Service for Mobile, the R1900 provides comprehensive features such as threat management, web content filtering, application visibility, analytics, and advanced GNSS capabilities, including AVL tracking and cellular coverage maps. Designed to withstand harsh environments, the R1900 ensures enterprise-class reliability, scalability, and security. Its embedded 5G modem automatically switches to Cat 20 LTE when outside 5G coverage, guaranteeing stable connections for critical systems and services.



MCA delivers education institutions the end-to-end communications solutions they need to support their mission-critical fleet management operations.

Solution Brief | School Bus Connectivity

Device Management | [NetCloud for Mobile](#)

Ericsson's NetCloud Service, ensures that all your routers stay connected, secure, and "always-on" by providing over-the-air updates to the latest firmware and software. With NetCloud, your fleets network remains agile, scalable, and future-proofed, meeting the ever evolving demands for e-Learning and student safety. Available as a subscription service, NetCloud for Mobile offers advanced support, extended warranties, and on-demand training. NetCloud continuously delivers new features, insights, and innovations to optimize your fleet's network performance. From a single location or remotely via smart devices, you can register, monitor, and update all your routers, ensuring seamless operation across your entire fleet.



Multi-Band Antennas | [Mobile Mark LTMWG943](#)

To maximize Wi-Fi range, cellular coverage, and GPS accuracy, We recommend pairing R1900's with Mobile Mark LTMWG943 antennas. These ruggedized, low-profile antennas contain eight separate elements, including cellular, Wi-Fi, Bluetooth, and GPS GNSS, all designed to enhance router performance.

When connected, the LTM antenna boosts your vehicle's 4x4 5G MiMo cellular performance, 2x2 MU-MiMo Wi-Fi 6 connectivity, and GPS/Glonass accuracy. Designed for harsh environments, these antennas are rugged-built to MIL-STD-810G specifications with an IP67 rating when properly mounted, ensuring excellent performance during rugged use and extreme conditions.

Why Choose MCA | [Unmatched Experienced](#)

For nearly 30 years, MCA's Cellular Networking team has been a trusted partner for providing mobile connectivity solutions to K-12 schools across the nation. With top-tier cellular hardware from only the most reliable manufacturing partners, we support all aspects of your fleet connectivity projects—from hardware selection to installation and ongoing support.

Our DevProv+ services team pre-configures, provisions, kits, and ships your devices "hot" and ready for immediate deployment, ensuring fast, hassle-free installations. Our professional installers make sure that every device is operating securely, reliably, and at peak performance, ensuring your fleet stays connected when it matters most.



CONTACT US TODAY TO ENGINEER YOUR SCHOOL BUS CONNECTIVITY SOLUTIONS