



RFID for School Buses and Student Safety

Student Safety Protection and Visibility During Busing and Within School Facilities

A safety protection and visibility plan should be flexible to adapt to the social and security requirements of the local communities. AVANTE Personnel Visibility and Real-Time Transportation Visibility System is designed to provide for the potentially diverse acceptable balance of privacy and security.



In the case of more automated data capturing, the FSN personnel visibility system incorporates the following innovations to achieve both privacy and safety in the case of students in transit and on the school grounds:

- Short range RFID-enabled badge signals allow the RFID readers to record students entering or leaving school buses.
- The same short-range signal of 10-20 ft read distance also provides nodal visibility of students in school grounds when they enter or exit the school.
- The passive RFID tag inside the RFID-enabled badge can be used for special access control and as a debit card.
- The same drivers, teachers and staff RFID-enabled badges may be programmed to provide real-time visibility at all time to ensure accountability of all operations involved with students.
- In case of emergency, the RFID-enabled badge can be activated "on-demand" by students or by the system administration to provide full real-time location of the students within the school grounds.

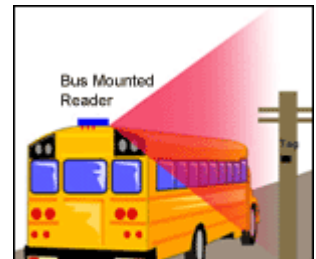
As the student passes the card reader upon entering or exiting the bus, the time, date and location are logged and transmitted to a secure database. The school system can then



access the information from any web browser using Omnitrol's software application.

Our RFID system can be integrated with existing GPS technology that is already implemented on some school buses throughout the country. This one-of-a-kind system captures data in four dimensions including latitude, longitude, time and speed at every data collection point, giving administrators a clear view of the bus' path, each stop and start, and even a time, date and location at which the door is opened. This creates certainty for school officials and parents, as well as accountability for the drivers. The system identifies when and where a student enters or exits the school bus to enhance their safety and security.

An innovative application involves fixing weatherproof RFID tags on poles or school bus posts along the planned bus route. RFID readers are then installed on each bus. The readers receive a real-time data input which includes a time-stamp at every tag location along the route. In this way, administrators can determine the exact bus location, the time it arrived, when it departed and how long the stop was. This information is wirelessly relayed to school bus administration and is web-accessible.



A bus-mounted reader receives a real-time data input from a RFID tag attached to a pole along the planned bus route.

Safety, security and accountability are fundamental expectations when children ride school buses. The industry record is already stellar. But RFID technology now makes the job easier and gives school bus operators, school officials and parents the peace of mind

that comes from knowing where their children are while making their trip to and from school.



The system ensures that every driver performs a daily safety inspection.

The system also helps make sure every driver performs a daily safety inspection, that mechanics perform needed repairs and that the vehicles are being operated properly.

Each day, at the beginning of their shifts, drivers inspect

their assigned buses to make sure all equipment and mechanics are operating properly. The inspections are part of mandated checks to ensure transportation safety. Until now, the district's drivers performed the inspections manually, filling out forms on clipboards and turning them in at the end of their shifts.

Now, the school district can have FSN install round yellow buttons in various places around

the bus. Measuring approximately an inch and a half in diameter, these buttons contain RFID chips. Software running on the handheld interrogators takes a driver through a series of questions about the vehicle's mechanical systems. At the same time, it directs the driver to visit specific RFID-tagged areas, or zones, on the bus and check certain items, such as the brake lights, rear tires, overhead interior lights and emergency exits. Upon arrival at each tagged zone, the driver waves the handheld near the RFID tag, which time- and date-stamps the answers given to the questions associated with that zone.

FALKEN Secure Networks(FSN)—Your partner for RFID automation

If you choose to pursue RFID implementation in your organization, here is the FALKEN Secure Networks commitment to you:

- FSN will provide solution architects to work with you to define system requirements for your particular installation. Multiple locations can be networked together for a central and real-time view and centralized management.
- FSN will do a RFID site survey to validate radio frequencies, tag types, system design and performance
- FSN will provide all necessary hardware and software to make the system work for you
- FSN will integrate the system with your existing enterprise management software
- FSN will provide documentation for the system, including operating procedures
- FSN will train your people
- FSN will provide warranty and continued system support

For RFID-enabled Document Tracking and Management, FALKEN Secure Networks (FSN) and partners bring together the right technologies to give you control over your files and make your office run more efficiently. Our automated and secure processes save time and labor, and prevent problems before they occur. With FSN ,you get the latest, non-proprietary secure RFID technology with the most powerful and flexible RFID file tracking software available.

Contact Us

FALKEN Secure Networks is a specialized System Integrator, RFID Solution Architect, and Value-Added Reseller with focused expertise in the RFID site survey, cost-effective design, and turn-key project implementation.

Contact FSN at sales@falkensecurenetworks.com



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