THE SOLUTION FOR SCHOOL BUS SURVEILLANCE
A school bus system is one of the most important transportation methods for students all over the world. But the potential safety risks associated with them often go overlooked. A school bus security system should be able to:

- Supervise drivers to prevent unsafe driving
- Capture the bus’s interior and exterior for comprehensive monitoring
- Monitor the entire vehicle and ensure students remain safe to and from school

Common Challenges

- Occupancy control
- Driver monitoring
- Accident response

Purpose of The System

- System Stability & Reliability
  Maintain a smooth & reliable system at all times
- SMS Linkage
  Parents receive notification after student swipes ID card on bus
- HD Video
  Ensure video quality for real-time monitoring & review
- Accurate GPS Location
  To locate & track vehicles in real-time
- Effective Detection
  Take precautionary measures in a timely manner

Data Analysis
Using data analysis to improve management
System Architecture

Mobile Video Surveillance System

System Components for Mobile Surveillance Systems

Onboard video management
- Mobile video recorder and cameras installed on vehicle

Transmission Network
- Using 3G or 4G network connections

iVMS Management
- Central management for monitoring and more

Mobile Video Surveillance System for Multiple School Buses

Surveillance Center
- Hybrid SAN
- SMS
- CMS
- Client

LAN

Mobile Cameras

Wi-Fi Backup

Vehicle

Base Station

Bus Station

Internet/VPN

Live View

GIS Map

GPS Data

Mobile DVR/NVR

3G
Features

1. Receiving the real-time tapping card record via iVMS
2. Searching the history tapping card record
3. Sending the SMS to the student’s parents
4. Supporting exporting bus attendance report
**System Components and Highlights**

**Onboard Video Management With Front End Devices**

Data stream and messaging transmit entirely across a wireless network

- **Device registration data**
- **Device “heartbeat” signal for backup**
- **Live view & playback stream**
- **GPS data**
- **Alarm data**

*The ability to perform certain functions at a command center depends on local wireless network coverage, bandwidth, and quality. Hikvision engineers will assist in examining and/or creating the necessary parameters during installation process.*

**Transmission Network**

Accurate GPS location information is sent to the center in real-time and is stored for playback

High quality video footage is recorded locally. Remote access to video facilitates review and forensic evidence gathering

Two-way audio between driver and command center provides convenient communication when needed

When local alarm is triggered, real-time notifications will be sent to command center

**iVMS Management**

Central vehicle management and vehicle parameter configuration

Traffic data analysis includes vehicle mileage statistics, network usage for transmission, and more

Live view for real-time video provides easier management and monitoring

Two-way audio communication ensures communication between command center and any vehicle when necessary

Alarm, system updates, and linkage – Receive and monitor alarms, and ensure the command center is alerted of events
Additional Features

Optional Wi-Fi backup
With high transmission speeds (over 30 Mbps per device), users can backup and secure all video footage of an entire day rapidly.

Log rides with student ID cards
ID cards equipped with parent contact information send text messages as students board the bus. Information on a card also transmits to the command center for recording, reviewing, or exporting reports.

Typical Application Scenario

Camera placement suggestion

1. Monitors driver seat and the entrance
2. Monitors the inside of the bus without blind spots
3. Monitors the inside of the bus without blind spots
4. Monitors the areas in front of the bus
5. Monitors entrance from the outside
6. Monitors the side traffic and exterior of the bus
7. Rear-facing security and traffic camera
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