

Overview

- Commercial vehicle operators take on huge responsibility each time they transport passengers. Passengers expect to reach their destination safely, and there can be significant repercussions if they do not.
- Many driver monitoring applications are unable to correlate common safety risks, like dangerous road conditions, disruptive passenger behavior or malfunctioning equipment to deviations in driving behavior, in part because networking technology is not optimized for mobile vehicles.
- LILEE Systems specializes in transportation solutions to improve safety, efficiency and experience. By combining onboard CCTV with IoT sensor data, operators now have real-time situational awareness and video-based ledgers of operational context to mitigate risk and improve efficiency.

SafeRide™ protects passengers, drivers and assets

Event-based, video monitoring provides live views and records of road conditions, passenger and driver behaviors

Today, more and more people are relying on shared transit to access work, healthcare and leisure. As more people use shared transportation, technology is redefining how operators ensure safety for both passengers, employees and even communities. There are many variables that can lead to accidents, making it difficult to pinpoint fault when something goes wrong. Some of the most common causes of bus accidents include:

1. Distracted or drowsy drivers
2. Defective or malfunctioning equipment
3. Challenging operating conditions - road and cabin distractions

Unfortunately, accidents are not the only safety concern for operators. There is always the chance that individuals intending to do harm can board buses, light rail and shuttles.

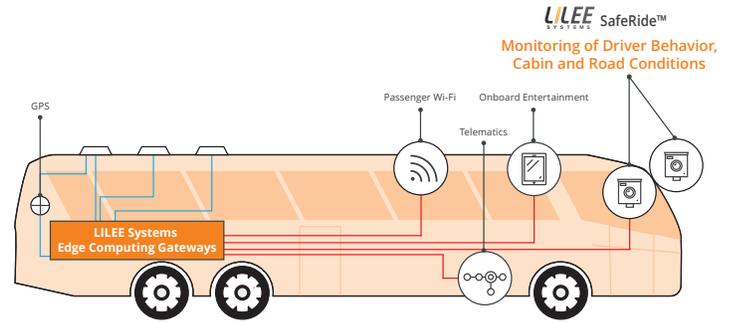


To date, driver and fleet management solutions typically give insight into a few variables but do not capture full operational contexts. Operators often see indications that a potential safety breach, such as hard braking or cornering, has occurred but cannot understand conditions associated with the event. Was the driver asleep at the wheel, or did a child run out into the road?

SafeRide's event-based video monitoring platform eliminates that uncertainty. The combination of real-time video feeds of drivers, cabin and road conditions plus stored visual records of conditions associated with events and incidents provide context to ensure safety, improve efficiency and mitigate risk.

Solution Approach

SafeRide links sensor-based events (e.g. hard braking, speeding and DTC codes) with CCTV views of road conditions, driver behavior and cabin activity. SafeRide's "see what I see" interface gives managers and authorities views of operational contexts in real time. When stored, records provide complete operational transparency and can be re-used for coaching, increasing efficiency and mitigating liability risks.



The SafeRide solution consists of:

1. Live View

SafeRide supports live views streamed from up to 8 cameras per vehicle. Remote operators can access onboard cameras to see live views of drivers, cabin and external conditions. With video-based situational awareness, operators can make targeted decisions to protect passengers, drivers and assets.

2. SafeRide Events and Event Videos

SafeRide Events are discrete events captured by sensors housed on the LILEE gateway or triggered by a driver emergency button. When an event is triggered, SafeRide captures 30-second video clips, 15 seconds before and after events, from all integrated cameras.

3. Video-on-Demand

Operators can request local videos based on the bus number, date, and timeframe to be streamed to SafeRide dashboard. Video records are stored in T-Cloud for 30 days. Customers can view and analyze past events or re-use videos for coaching and exonerating themselves from false claims or for regulatory compliance.

4. Live Telematics

SafeRide tracks diagnostic trouble codes and vehicle location in real time. In the case of incidents or breakdowns, managers can work with colleagues, partners or authorities to resolve issues safely and effectively. Past vehicle locations can also be tracked for troubleshooting or tracking Wi-Fi downtime.

5. Alerts and Notifications

Users can set up SMS and email alerts to notify them of high-priority events that need to be reviewed immediately, such as driver-initiated events. SafeRide allows operators to define event types for which they will receive real-time alerts via email and/or SMS.

Feature	Benefits
On-demand views of drivers, passengers and road conditions	Actually see what is going on, as it's happening. Operators can immediately make targeted decisions and, if necessary, share information with emergency and security organizations
User-defined SMS and email notifications	Alerts for pre-defined, high-priority and driver-initiated events can be pushed out to personnel immediately for effective incident management
Edge computing, onboard sensors and storage	LILEE gateways reliable connectivity to stream video, local video storage, and embedded sensors, including GPS, to automatically detect events
Open, standards-based gateway platform	The SafeRide platform can integrate with 3rd-party systems and applications including badge readers, dispatch systems and AI applications
Integrated with cloud management systems	LILEE T-Cloud provides web-based device optimization and management, cloud-based video storage and reporting capabilities

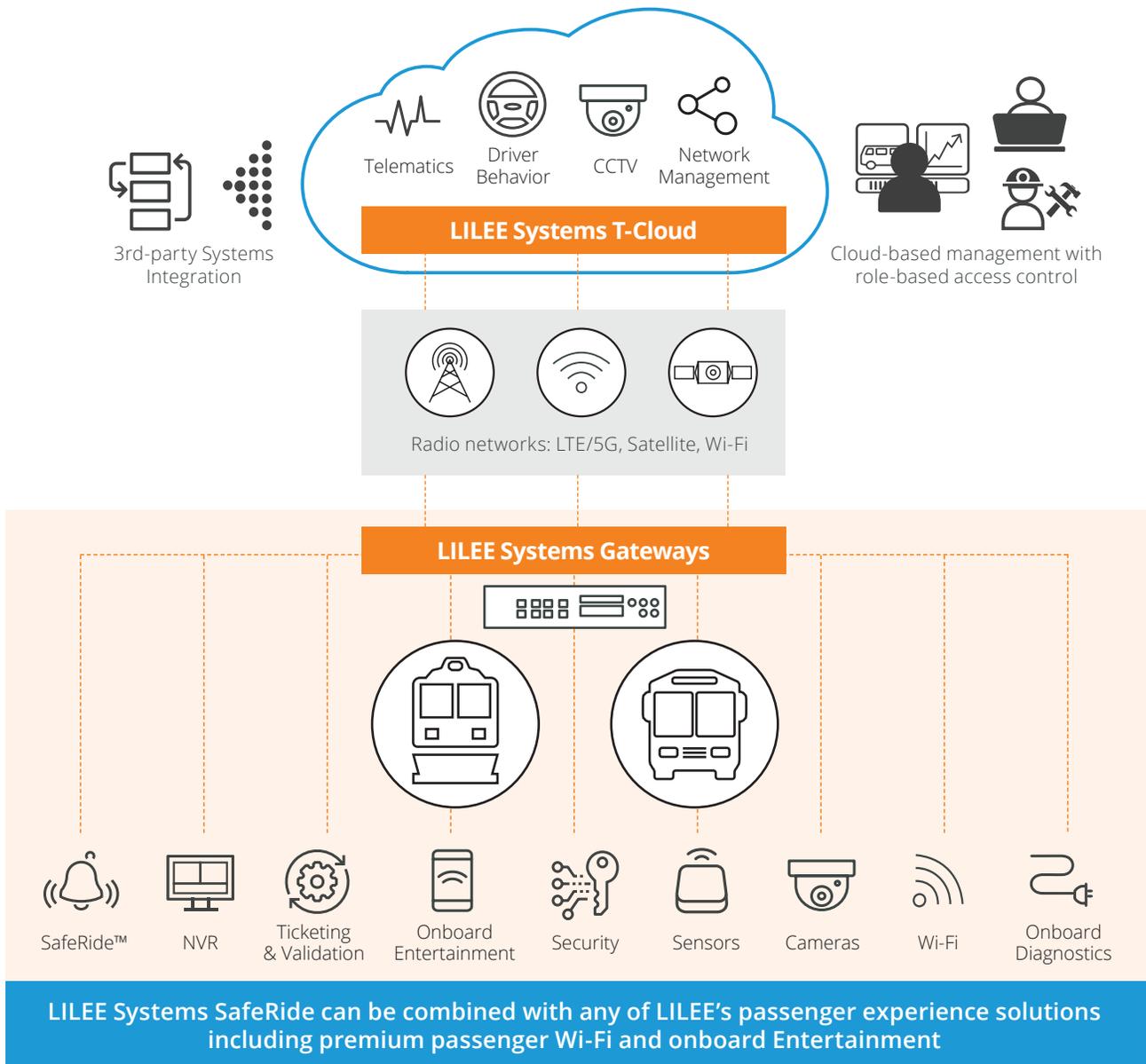
How it works

LILEE Systems was founded to provide wireless communication networks for mandated safety applications in the transportation industry. The SafeRide platform uses proven technology, purpose-built for transportation to ensure reliable connectivity and performance, at scale. The SafeRide platform can be integrated with third-party applications, such as AI, dispatch and ticketing and includes:

1. LILEE gateways house sensors and are installed onboard to provide reliable wired and wireless connectivity, storage, and edge computing. Containerized applications run the SafeRide Network Video Recorder (NVR) and Advanced Driver Assisted System (ADAS) and other third-party applications, while solid state drives store videos locally until cost-effective file transfers are available.

2. LILEE-OS provides security, Quality of Service (QoS), traffic segmentation and management, and link aggregation. Mobile WAN ensures highest amount of throughput at the lowest possible cost, even for data-intensive video streaming.

3. LILEE T-Cloud is a simple, intuitive, cloud-based management system to monitor performance. It monitors, onboards, and configures onboard devices as well as edge and cloud applications. The SafeRide dashboard accesses information stored and processed in T-Cloud.



Summary

For operators, fleet and asset managers, SafeRide provides the most effective form of insight - simply, the power to see.

SafeRide's "see what I see" interface helps operators understand and document operational context associated with events, incidents or accidents. Stored events with visual context provides full operational transparency and can help with training, efficiency and diffusing doubt associated with liability. Finally, SafeRide can be integrated with other enterprise systems and AI applications to simplify workflows and build intelligence over time.



Videos can be retrieved remotely, no matter where the bus is located, giving operators a "see what I see" view. They can be played at 2x, 4x, 8x and 16x normal speed



Reports and dashboards eliminate ambiguity, reinforce safe driving practices, help conserve fuel, and give operators ability to benchmark progress



Links drivers and buses to company operations centers and enables communication with law enforcement for effective incident and crisis management



Zero-touch cloud management includes automatic device onboarding, centralized configuration and software and firmware updates



Only short, relevant videos are transmitted and saved to the cloud, resulting in significant cost savings. Videos can be re-used for training, insurance support and to exonerate operators from false claims

Schedule a SafeRide demo

Contact sales@lileesystems.com or +1 (408) 988-8672 for a SafeRide demo and learn how SafeRide combines insight with sight to ensure safety, improve efficiency and mitigate risk.

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