

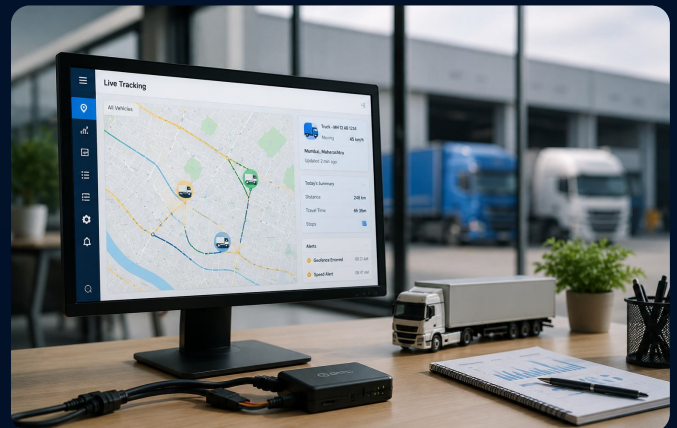


شركة ابتكارات حادة  
Sharp Innovations  
Innovating The Tech Experience

# LIVE VEHICLE TRACKING SYSTEM

## OVERVIEW

A Live Vehicle Tracking System integrates hardware (GPS devices) and software platforms to monitor vehicle locations, performance, and operational data in real-time. It is essential for modern fleet management, logistics, and personal vehicle security, providing comprehensive visibility from a centralized digital interface.



## CHALLENGES

- 1. Signal Obstructions:** Dense structures, tunnels, and severe weather can block satellite or cellular signals, leading to gaps in location data.
- 2. Connectivity Limitations:** Reliance on cellular networks means tracking can experience delays or data loss in remote areas or during cross-border travel.
- 3. Hardware Fragility:** Low-quality devices or improper installation can cause malfunctions, leading to inaccurate data or complete system failure.
- 4. Privacy & Acceptance:** Some employees may view constant monitoring as an intrusion of privacy, potentially leading to resistance or misuse.



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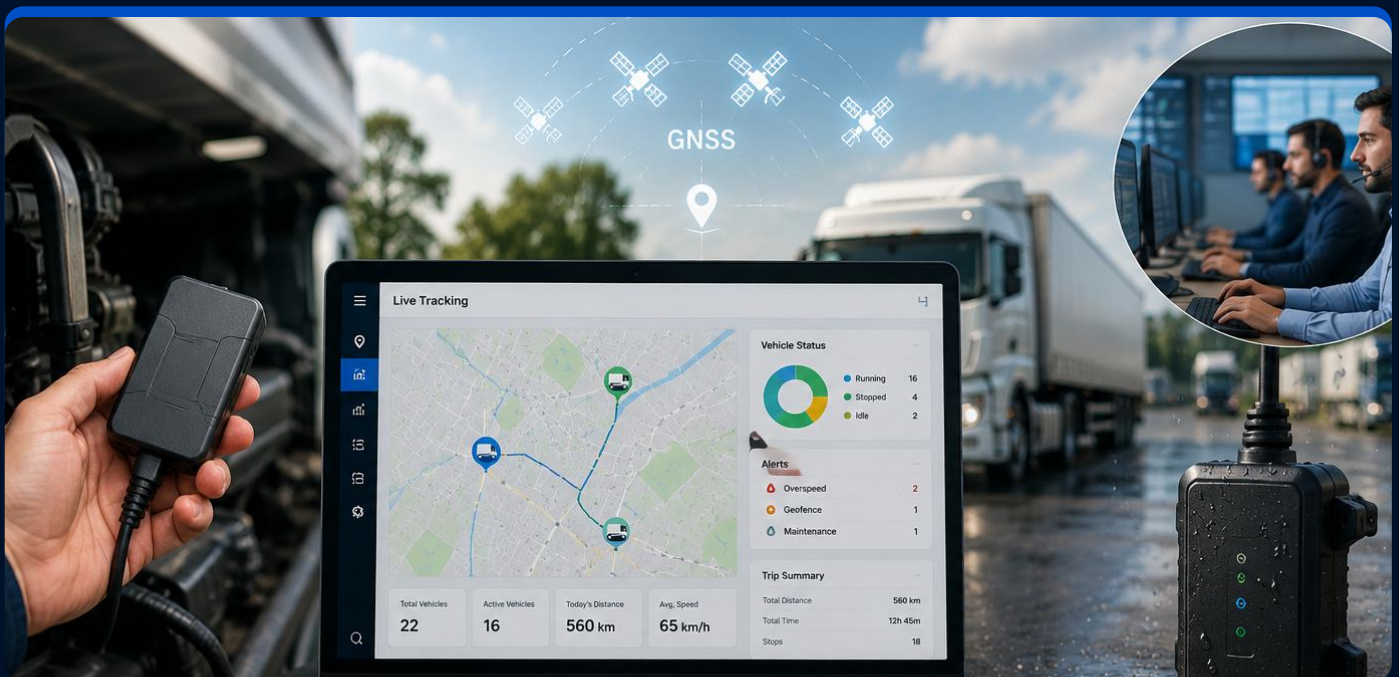


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# ANALYSIS

- 1. Operational Inefficiency:** Without live data, businesses rely on manual reporting, which is prone to errors, communication delays, and lack of accountability.
- 2. Security Risks:** The absence of real-time visibility makes vehicles vulnerable to theft and unauthorized use, with limited recourse for recovery.
- 3. Resource Waste:** Inefficient route planning and excessive engine idling significantly increase fuel consumption and maintenance costs.
- 4. Data Discontinuity:** Relying on intermittent tracking (e.g., RFID checkpoints) results in fragmented journey history, hindering informed decision-making.

# SOLUTIONS



- 1. Advanced Connectivity:** Utilize systems that support multi-GNSS (GPS, GLONASS) and robust cellular or satellite roaming to ensure continuous tracking even in remote areas.
- 2. Robust Hardware & Maintenance:** Implement high-quality, weatherproof hardware with professional installation and lifetime maintenance warranties to prevent technical failures.
- 3. Data Buffer Technology:** Use devices with "store-and-forward" capability that record data locally when offline and sync it automatically once the signal is restored.
- 4. Transparent Communication:** Establish clear policies regarding the use of tracking data to address privacy concerns and foster employee cooperation.



# KEY FEATURES



## Real-Time Mapping

Instantly view vehicle locations, status (moving/idle/parked), and speed on a dynamic digital map.



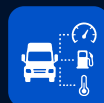
## Geofencing

Create virtual boundaries to receive immediate alerts when a vehicle enters or exits authorized zones.



## Historical Playback

Access up to 90+ days of route history to analyze performance, optimize future routes, and resolve disputes.



Monitor vehicle health (engine diagnostics, fuel levels, ignition status) and driver behavior (harsh braking, rapid acceleration).

# END RESULT

- **Enhanced Security:** Significantly improves the ability to prevent theft and allows for immediate action and recovery if a vehicle is stolen.
- **Cost Optimization:** Drastically reduces fuel and maintenance expenses through route optimization, reduced idling, and predictive maintenance.
- **Increased Productivity:** Streamlined operations and automated reporting reduce manual administrative tasks, allowing for better fleet utilization.
- **Improved Safety & Compliance:** Encourages responsible driving habits and simplifies compliance with regulatory reporting requirements.



# TECHNOLOGY



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