



Fleet Manager's Guide to Smart Dash Cams

How to Boost Fleet Safety & Efficiency
with AI-Driven Video Telematics



Introduction

Data without context can be ambiguous and misleading. Such can be the case with data collected by telematics devices.

You'll be able to see that a risky driving behavior occurred, but the context around it is often lost. What were the road conditions? Did another vehicle cause the incident? What was the driver doing at the time of the incident?

Smart dash cams provide much-needed context in real-time, not only for coaching and training purposes, but also for cost savings and fleet efficiency, among many other benefits.

Installing video telematics systems in commercial vehicles combines data from telematics devices with video footage captured from smart dash cams. Doing so gives you real-time visibility across your fleet, improving safety, productivity, decision-making, and cost savings.

Smart Dash Cams are a Must-Have for Fleet Safety

Without comprehensive tools and systems in place, commercial fleet owners face a mountain of challenges in ensuring safety and compliance regulations, such as:

Driver error or negligence	Drivers may engage in risky behaviors or develop patterns such as speeding, distracted driving, or driving under the influence, leading to accidents that can result in injuries, property damage, or fatalities.
Identifying and addressing risky driving	Missed opportunities for coaching and training pile up, especially when drivers are on the road for extended periods with the likelihood of increased accidents or incidents.
Compliance with regulations and standards	Failure to comply with various regulations and standards can result in fines, penalties, or loss of business.
Managing costs and efficiency	Insurance premiums, fuel expenses, and maintenance can add up quickly, impacting the bottom line. Improving efficiency and reducing costs without sacrificing safety or compliance can be a difficult balance to achieve.

These challenges are quickly addressed with a comprehensive approach that includes the use of technology, training and coaching programs for drivers, and a commitment to continuous improvement. Smart dash cams are integral to overcoming these challenges by providing real-time, clear, and always accessible footage of driving conditions and driver behavior.

Ignoring these challenges can undoubtedly lead to negative impacts ranging from financial penalties to company reputation and driver morale.

Increased insurance premiums and legal fees	Insurance companies may view fleets with a history of accidents or violations as high-risk, leading to higher premiums. Legal fees can also add up quickly in the event of accidents or incidents that lead to litigation.
Loss of business opportunities and revenue	Safety and compliance issues can impact a fleet's reputation and brand image, leading to loss of business opportunities and revenue. Potential customers may view fleets with a history of accidents or violations as unreliable or unsafe, leading them to choose a competitor.
Damage to the company's reputation and brand image	Negative press or social media attention can spread quickly and impact public perception of the company.
Lower driver morale and productivity	Drivers who feel unsafe or unsupported may experience lower morale and productivity, leading to decreased efficiency and increased turnover rates.

Investing in solutions that incorporate smart dash cams can help fleets avoid these potential consequences while improving safety, compliance, and efficiency.

How Smart Dash Cams Work

Video telematics systems combine vehicle data with video footage. They feature road-facing or driver-facing cameras (or both) that automatically start recording when the trip begins. These transmit video events in sync with other telematics events or are paired with enabled telematics devices that transmit the video and other telematics event data over a cellular network.

To truly unlock the potential of your fleet and ensure safety, your cameras and the software supporting them must use AI technology.

Unlike a standard camera, AI-powered smart dash cams can detect and alert operators of circumstances that might lead to collisions. This leads to proactive action, such as driver coaching, rather than reactive action, aka settlements and legal action after an incident occurs.

Smart cameras can also detect risky driving behaviors while they're happening and send in-cab alerts to drivers, so they can react quickly and prevent incidents.



Common smart dash cam installation methods and configurations include:

Cameras are commonly mounted on the front windshield to capture a clear view of the road ahead and the driver's actions behind the wheel. Two different camera options provide a customized view of the road trip:

- Road-facing: (Also known as forward-facing) cameras with smart capture footage of the road ahead. They provide a recorded view of the driver's perspective.
- Driver-facing: These cameras provide an internal view of the cab. They help fleet managers monitor driver behavior.

While you don't need to have both options installed, dual-facing views can show you both the external and in-cab situations that led up to specific incidents. Sometimes, a single view may only tell one side of the story. For example, did the driver brake suddenly

because of something out of their control on the road, or was it because they weren't paying attention? A dual-facing camera setup will help give you full picture.

Smart dash cam footage storage and access

Smart dash cams offer cloud storage options, through which fleet managers can connect to the dash cam device directly or use a fleet management software application. This software allows managers to view the footage, analyze driver behavior, and generate reports on safety and compliance.

Smart dash cam footage can be accessed remotely via a web portal or mobile-friendly app for greater flexibility and convenience. With this feature, managers can monitor driver behavior over time while responding to real-time safety incidents as needed.

Risky driving behaviors captured by smart dash cams

Video telematics systems that feature smart dash cams are designed to capture and detect a range of crucial driving behaviors, such as:

- Harsh Acceleration
- Lane Drift
- Drowsy Driving
- Harsh Braking
- Tailgating
- Stop Sign Violation
- Harsh Cornering
- Forward Collision Warning
- Traffic Light Violation
- Speed Limit Violation
- Distracted Driving (Cell Phone, Drinking, Eating)

How Capturing Smart Dash Cam Events Benefits Your Fleet

Smart dash cams can provide fleet managers with a comprehensive view of driver behavior and help identify improvement areas.

Leveraging captured event footage leads to cost savings, safer driving practices, improved compliance, and a more efficient and profitable fleet operation.

	Cost Savings	Safety Benefit	Boost Efficiency
Lower insurance costs	<input checked="" type="radio"/>	<input checked="" type="radio"/>	
Improve overall fleet and driver safety	<input checked="" type="radio"/>	<input checked="" type="radio"/>	
Automate driver coaching and training	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Improve fleet efficiency	<input checked="" type="radio"/>		<input checked="" type="radio"/>
Lower fleet maintenance costs	<input checked="" type="radio"/>		
Improve CSA scores	<input checked="" type="radio"/>	<input checked="" type="radio"/>	
Improved fuel efficiency	<input checked="" type="radio"/>		<input checked="" type="radio"/>
Reduced legal costs and fines	<input checked="" type="radio"/>		
Improved productivity and driver retention	<input checked="" type="radio"/>		<input checked="" type="radio"/>

Lower Insurance Costs and Providing Evidence in Case of Accidents or Incidents

Identifying unsafe driver behaviors and addressing those with proper coaching and training can help reduce accident costs and insurance premiums. As a result, fleets can realize significant cost savings, particularly those with a history of accidents or violations.

Smart dash cams record video footage of the road and driver behavior, providing critical evidence in case of accidents or incidents. Fleets can defend against false claims or lawsuits, giving insight into the cause of accidents and exonerating the driver.

Support fleet and driver safety and compliance

Machine learning algorithms used by the smart dash cam analyze video footage and identify dangerous driving behavior. Data collected can help develop and improve targeted driver coaching and training programs, reducing the risk of accidents and violations.

Some smart dash cams provide real-time feedback to drivers. For example, audio alerts or visual cues occur when risky behavior is detected, helping drivers modify their behavior.

Video footage captured by smart dash cams can be used to verify compliance with regulations such as the Hours of Service (HOS) regulations or the Electronic Logging Device (ELD) mandate, reducing the risk of fines or penalties.

Reduced costs and improved efficiency

Smart dash cams can help improve fuel efficiency and reduce vehicle wear and tear by identifying and addressing inefficient driving behavior such as hard braking or speeding. This can result in reduced maintenance costs and minimize asset downtime.

Conversely, smart dash cams can reduce the risk of false claims or lawsuits with the data collected in video footage and streamline insurance and legal processes. This can significantly reduce legal costs and fines for fleets operating in regions with strict liability laws.

Leveraging smart technology in dash cams can benefit your fleet from improved fleet safety and compliance to cost savings to boosting efficiency and decision-making. Of course, the ROI associated with investing in smart dash cams will vary depending on factors such as fleet size, the level of risk, and the specific features and functionality of the dash cams. However, many fleets can see a significant ROI from investing in smart dash cams, and some may even see a return on investment within just a few months.

CalAmp is proud to offer a broad portfolio of fleet management and safety solutions. CalAmp Vision, our AI-driven smart dash cam solution, helps fleets revolutionize safety and avoid liability. Interested in learning more about CalAmp Vision dash cams? [Click here.](#)



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