Squarell technology

SOLUTIONS FOR LIGHT COMMERCIAL VEHICLES

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SAFETY PARAMETERS

Why you need safety parameters from your fleet management system

Many fleet owners look for details about the use of their vehicles. Safety is an important topic. Traffic is more hectic, time pressure is high and maintenance and insurance costs need to be controlled.

Besides the Fleet Management System (FMS) data, Squarell offers a wide range of safety parameters. The following items can be added to your telematics reports:

- Were the lights turned on when the weather conditions required this?
- Did every passenger in the vehicle fasten the seat belt?
- When are the doors opened? Is the vehicle locked during the trips in order to guarantee that your goods are transported safely?
- Was the parking brake set?

These are just some examples to enrich your fleet management system with safety parameters. At *support.squarell.com* you find a list of vehicles that are supported.

Please contact your Squarell representative for more information.

LIGHTS

- Turn signal LH / RH
- Hazard lights
- Main lights
- High beam
- Brake lights
- Front fog lights
- Rear fog lights

SEAT BELTS

- Front left seat belt buckled
- Front right seat belt buckled
- Rear left seat belt buckled
- Rear right seat belt buckled
- Seat belt warning light

DOORS

- Front left door open
- Front right door open
- Rear left door open
- Rear right door open
- Trunk open
- Doors locked

WIPERS

- Front wipers
- Rear wipers

GENERAL

- Parking brake
- Ignition switch
- Engine running
- Vehicle moving
- Reverse direction switch

DRIVER AWARENESS PANEL

What is the DAP?

The Squarell Driver Awareness Panel (DAP) is an intelligent in-vehicle display that stimulates a smart driving style. to drive smarter. It gives visual and audible notifications to the driver without being intrusive. The DAP actively monitors the data on the vehicle CANbus to compare it's performance against vehicle standards and the fleet. When required, the DAP signals good or bad driving behaviour during the trip. Advanced Squarell algorithms are used to detect and highlight undesirable driving traits like poor anticipation of the road ahead and harsh usage of the accelerator. If desired, a status report can also be sent to a telematics device.

The DAP is available as software and in a hardware version.

Main causes for high fuel

- Idling
- Unnecessary braking
- In-efficient engine power use
- Harsh acceleration
- Coasting Cruise Control

Good fuel efficiency

- Moderate power usage
- Driving with cruise control
- Coasting
- Steady speed
- Pro-active driving behaviour

Why DAP?

- It is smart, self learning and accurate
- It is designed not to intrude on the drivers attention
- It saves fuel
- It reduces wear and tear
- It promotes a safer driving style
- It integrates perfectly with your solutions

EVENT DATA RECORDER

The digital evidence is often the silent witness to an accident. Recording relevant data helps to correct undesired and risky behaviour.

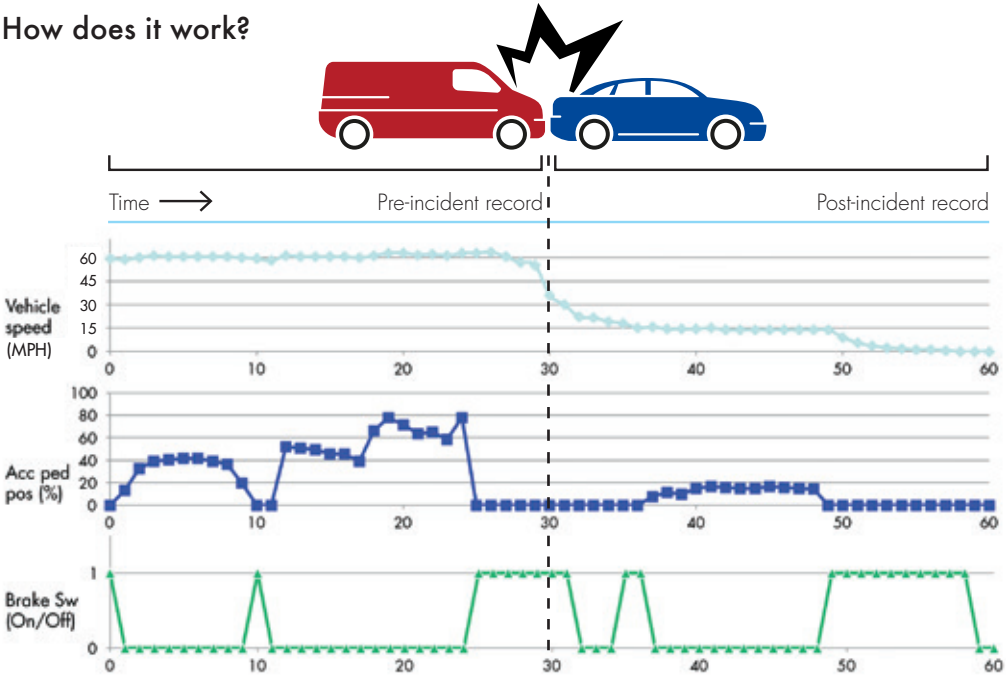
What is an event data recorder?

The event data recorder logs vehicle data seconds before and after a possible event. An event is usually detected by excessive deceleration of the vehicle. This does not necessarily have to be an accident. An event could also be harsh decelaration or harsh braking.

Why use an event data recorder?

Studies show that event recorders reduce the number of incidents by 10 to 20 %, save lives and protect your company's most valuable assets – your drivers and passengers. This technology has proven to enhance driving skills and helps correct risky behaviour, before these habits result in serious accidents.

How does it work?



In this example the fast decreasing vehicle speed triggered the event data recorder. As shown in the second graph: the accelerator pedal was released prior to the event, and the driver was braking during the event.

What do you need?

All you need is a to connect a Squarell interface to the CANbus. A dedicated device profile needs to be loaded to the device (contact your account manager for pricing and details), and of course a modem to send the data.

The deceleration value to trigger the event data recorder is adjustable (by the Telematic Service Provider).

Example

Pre-event message
Sent from 20 seconds before the event

Parameters:
- UTC time of event
- Brake switch (on/off)
- Clutch switch (on/off)
- Accelerator pedal position (%)
- Vehicle speed (MPH)
- Engine speed (RPM)
- Crash status (airbag/seatbelt/indicators/etc.)
- Acceleration/deceleration value (that triggered the event)

Post-event message
Sent 20 seconds after the event

Parameters:
- UTC time of event
- Brake switch (on/off)
- Clutch switch (on/off)
- Accelerator pedal position (%)
- Vehicle speed (MPH)
- Engine speed (RPM)
- Crash status (airbag/seatbelt/indicators/etc.)

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