Aggressive Driving Events in FieldLogix Telematics Devices

Aggressive driving events provided by FieldLogix telematics devices are generated by accelerometers embedded inside the devices.

The Accelerometers measure gravitational forces in milliseconds. Therefore, if the device detects a sudden change in gravitational forces, it will report this as an aggressive driving event.

How Accelerometers work

As the vehicle moves, the accelerometer continuously records acceleration forces along the X, Y, and Z axes. These forces are often measured in g-units (gravitational units), where 1 G is equivalent to the acceleration due to Earth's gravity (9.81 m/s^2).

Algorithms within the telematics device identify specific events (such as harsh braking, rapid acceleration, or collisions) based on predefined g-unit thresholds for acceleration changes.

The aggressive driving events occur immediately when the change in g-units is detected. Therefore, the device does not wait for a certain amount of time to elapse before recording it as an aggressive driving event.

For medium & light duty vehicles, the g-unit thresholds are the following:

Acceleration:	350 milli-G
Deceleration/Braking:	400 milli-G
Hard Cornering:	500 milli-G
Impact/Crash:	750 milli-G

Examples

1. Harsh Braking Detection: If the telematics device detects a rapid deceleration (e.g., an acceleration rate of 350 milli-G or more), it logs this as a hard braking event immediately.

2. Collision Detection: A sudden, significant change in acceleration across one or more axes (e.g., 750 milli-G or more) might indicate a collision. This event is immediately logged and transmitted for further action.