Telematics:

Telematics is a term that combines the words telecommunications and informatics to describe the use of communications and IT to transmit, store and receive information from devices to remote objects over a network.

There are several key components of a telematics device:

GPS receiver

Engine interface

Input/output interface (expander port)

SIM card

Accelerometer

Buzzer

How telematics works

The telematics device retrieves data generated by the vehicle, like GPS position, speed, engine light information and faults. G-force measured by a built-in accelerometer in the device. Then the telematics device sends the data up to the cloud.

A vast amount of data can be processed and analyzed with a telematics device and other connected hardware or sensors, such as:

Position

Vehicle speed

Trip distance/time

Idling time

Harsh braking and driving

Seat belt use

Fuel consumption

Vehicle faults

Battery voltage, and other engine data.

Finally, the data is decoded and brought into the fleet management software app for reporting and analysis. With the software, users can view and export reports and gain business intelligence such as the

top 10 drivers with the highest number of speeding incidents or vehicles that are due for scheduled maintenance.

Data analytics and machine learning offer a way to get further use from telematics data. For example, fleets can use benchmarking to see how their fleet performs on safety as compared to other similar fleets or understand if routes are structured in the best way.