SOLUTION BRIEF

Intel IoT
Usage-Based Insurance

Connected Telematics Enables Smarter Usage-Based Insurance

With an Intel®-based OBD-II dongle for advanced vehicle telematics, Davra Networks is making pay as you drive (PAYD) and other usage-based insurance models easier to deliver and more accurate.

By collecting more granular vehicle telematics and driving behavior data, insurance companies can create exponentially more robust usage-based insurance models and predictive analytics.

davra networks

Extracting Better Value from Vehicle Data

The Internet of Things (IoT) is powering smart and connected solutions that redefine transportation. Connected telematics is one exciting use case. Telematics is changing driving forever—and bringing intelligence to the edge is the key to success. From large-scale fleet managers to insurance companies, everyone can benefit from using the stream of data vehicles already produce—data that can be quickly accessed via the On-Board Diagnostic II (OBD-II) port found on almost all modern vehicles.

Now, Davra Networks is simplifying telematics to allow insurance companies to extract more granular data and, as a result, create better business models for usage-based insurance (UBI). An Intel®-based OBD-II dongle for advanced vehicle telematics and Davra Networks' IoT Application Enablement Platform (AEP) automate the collection of this data in near-real time, making UBI easier to deliver, more cost-efficient, and more accurate. With pay as you drive (PAYD) policies based on how many miles are actually driven, or even pay how you drive (PHYD) policies based on driving behaviors, consumers can benefit from possibly lower premiums, enhanced safety, and improved claims experiences. With more informed UBI models and predictive analytics, insurers can reduce claim costs, create more accurate risk pricing, modify risky behavior, and improve brand loyalty.

Advanced Intelligence at the Edge

The Intel-based OBD-II dongle brings advanced edge data analytics to vehicle telematics, faster. It securely collects, aggregates, and filters data, and performs edge-level data analysis in the vehicle. It then sends timely alerts and trend data to insurance companies, drivers, or fleet managers.

The Intel-based OBD-II dongle helps those developing telematics solutions to do so with great cost effectiveness, processing power, and versatility. This full-featured wireless communications platform is powered by the Intel® Atom™ x3 system-on-a-chip (SoC) processor. It harnesses scalable cloud technology and Intel compute power and IoT expertise to enhance safety, security, productivity, and profitability.

With more intelligence at the edge, insurance companies can model thousands of vehicle data points at submillisecond rates, without sending data to the cloud. Data is accompanied by GPS coordinates for situational awareness and context of road type, weather conditions, and speed limit.

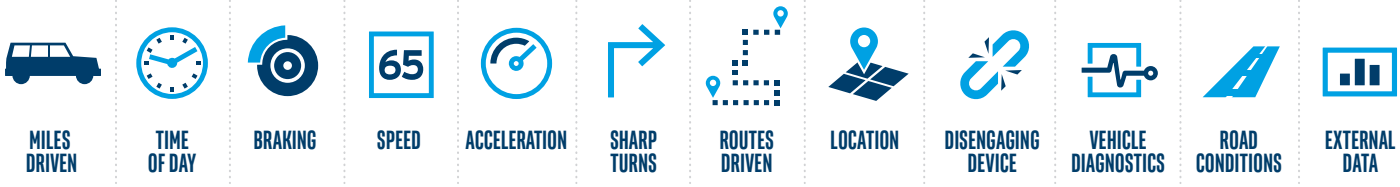

Figure 1. Using an Intel®-based OBD-II dongle, Davra Networks automates the collection of valuable data on how and where a vehicle is driven.

Centralized Platform for Robust Analytics

Through its IoT AEP, Davra Networks enables end-to-end, cloud-based applications for automated fleet management and telematics. On this platform, UBI models can easily be customized to provide new, competitive services to drivers, policy holders, fleet operators, and insurance companies. For example, this centralized platform allows insurance companies to aggregate the data from the OBD-II dongles across all vehicles and use it to create more accurate predictive analytics that gauge whether a driver is likely to be in an accident. Insurance companies can send reports to customers showing exactly how their driving affects their insurance rates, encouraging them to drive safer and smarter.

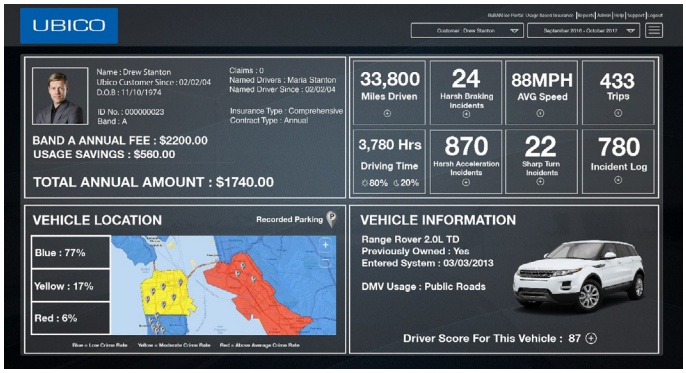

Figure 2. Cloud-based applications from Davra Networks are customizable and can show driver and vehicle information, vehicle location, and key telematics data.

Sophisticated Intel Security

Protecting vehicle data and control systems is a major concern for drivers and insurance companies. The Intel-based OBD-II dongle builds security features into every level by first fusing the BootROM during production. Secure Boot then establishes a chain of trust by verifying the loaded software.

To secure system memory, the security use cases and the modem execution and their memory are firewalled from the Linux*/Android* layer. The platform is further protected from reverse engineering by disallowing tracing capabilities in production and requiring a specific certificate to enable debug capabilities. Crypto accelerators support several different encryption standards, while SecureVM virtualizes the memory and processor core and encrypts all data that it stores.

Intel® Telematics Software Development Kit (SDK) Speeds Time to Market

To support the dongle, Intel offers an Android-based telematics software development kit (SDK), which allows developers and designers to quickly create robust telematics solutions that meet a wide array of requirements. It provides reference APIs for accessing diagnostic and sensor data and manages functions like security, location, tagging, and network services. It also incorporates telematics algorithms to analyze driving style—such as hard braking and cornering—and fuel consumption.

INTEL DELIVERS A POWERFUL PLATFORM FOR CONNECTED TRANSPORTATION

The Intel®-based On-Board Diagnostic II (OBD-II) dongle for advanced vehicle telematics is part of an ecosystem of Intel®-based solutions for connected transportation and logistics. It reflects the investment Intel has made in building a robust, application-ready, end-to-end platform for transportation—a platform that was designed to encourage the development of new business models on existing infrastructure.

Intel®-based architecture offers scalable, flexible compute from device to cloud. Smart and connected devices can ingest data of all types and run applications and analytics for true intelligence at the edge.

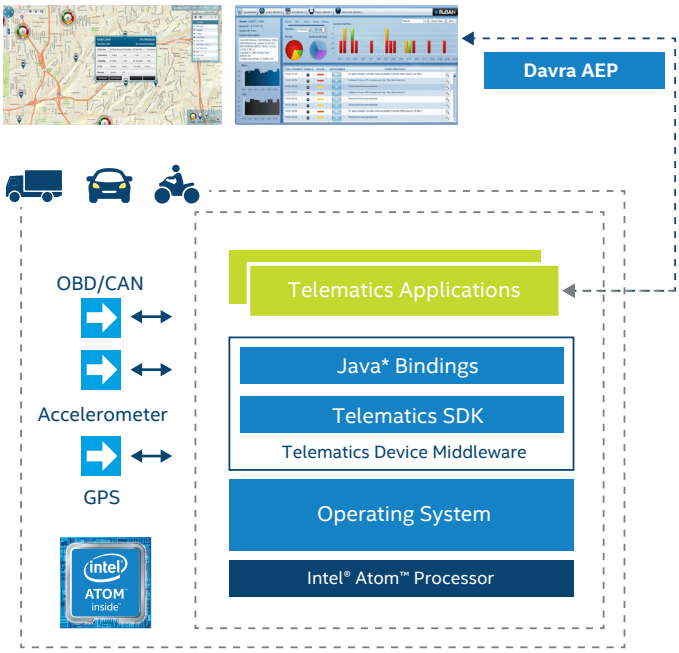

Figure 3. With its IoT application enablement platform (AEP), Davra Networks provides end-to-end, cloud-based applications for automated fleet management and telematics.

Remote Manageability

The Intel-based OBD-II dongle is preconfigured to provide cloud connectivity. This facilitates over-the-air updates for device configuration, security, and firmware.

Cloud or On-Premise Deployment

When deployed together, Davra Networks' IoT AEP and the Intel-based OBD-II dongle deliver a secure, reliable solution for usage-based insurance. It can be deployed on-premise or on a public, private, or hybrid cloud. All data remains the property of the customer and integrates easily with other business systems using the latest in web service and API technologies.

For More Information

Learn more about Intel-based OBD-II dongle solutions:
Go now ›

Learn more about Davra Networks' IoT AEP:
Email info@davranetworks.com.
Visit davranetworks.com.

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