Light Duty Commercial Telematics

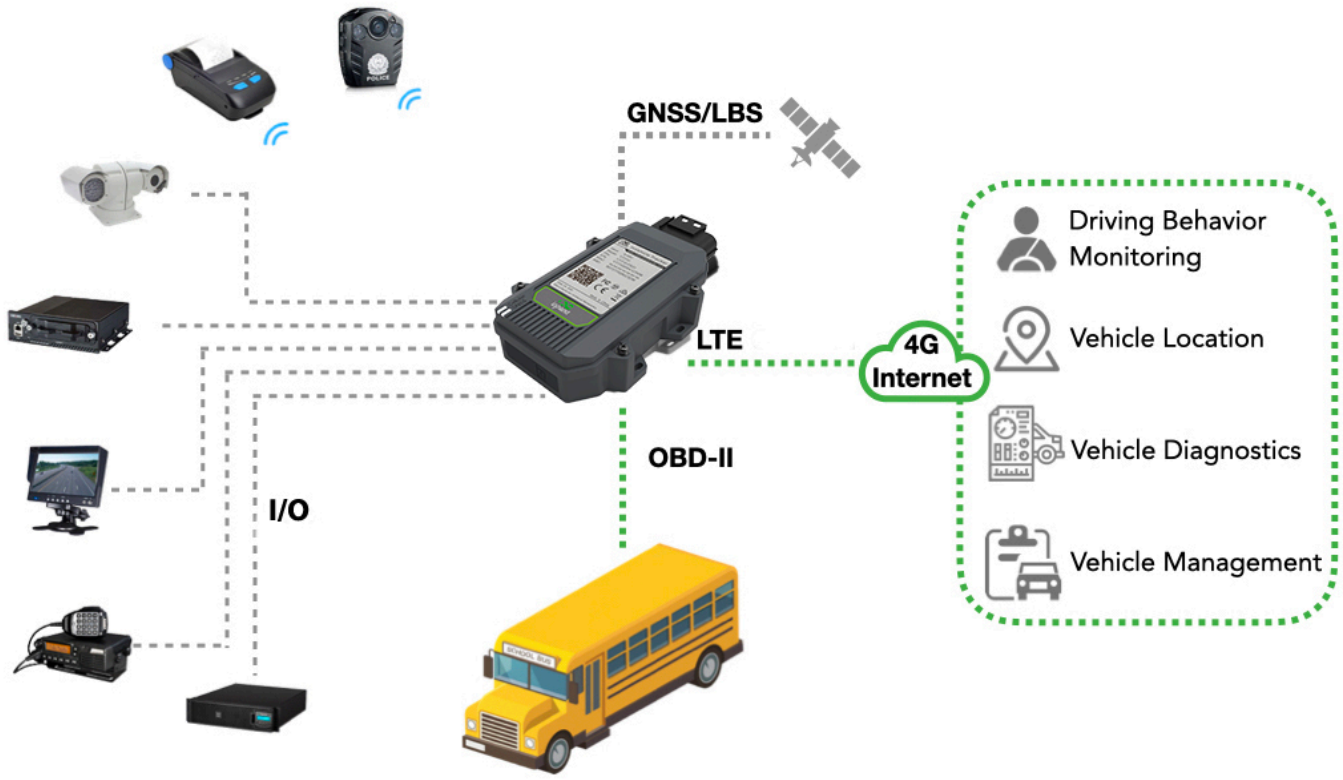
Light duty commercial vehicles are the largest portion of the commercial telematics opportunities. Faced with the need of data collection and analysis, remote diagnostics and lower fuel consumption, InHand Networks offers a solution using the VT310, connecting multiple peripherals on board, ensuring safe and efficient running of vehicles and business.

Background

Light duty commercial vehicles are the largest portion of the commercial telematics opportunity. The Global market is anticipated to grow to nearly 3.2T USD globally by 2025.

New technologies such as big data and the Internet of Vehicles (IoV) require collection, aggregation and analysis of vehicle data from a variety of sources including diagnostic ports
(J1939/J1708/OBD-II) to improve vehicle maintenance, lower fuel consumption, and reduce risk (speed, RPM, and harsh braking/acceleration) as well as integration potential to high speed data (tablet connectivity for FMCSA and IP cameras, for example).

InHand's Solution of Telematics for Light Duty Commercial Vehicles



Featuring extensive I/O, standard protocols for communications and vehicle diagnostics, the VT310 can be connected to multiple peripherals on board, constantly collects data from different parts of the vehicle, secures uninterrupted communications between vehicles and the management center, reports problems once detected, ensuring safe and efficient running of vehicles and business.

Solution

Using InRouter900 industrial LTE router, the remote monitoring system connects CNC machines distributed at various industrial sites to the cloud platform, to collect and analyze the machines' operation status, degree of wear of vulnerable parts, and data of the electric controlling systems.

Through Python programming, the InRouter900 is developed to support edge computing, to perform data acquisition, data monitoring, data filtering, data cleansing, data security protection, data storage, data submission and logic processing on the front end, reducing the communications bandwidth needed between industrial sites and the central monitoring center, optimizing the cloud com-puting system.

The InRouter900 provides reliable low latency communications between CNC machines and the cloud center. Dual-SIMs allows transmission link redundancy, multi-layer link detection and recovery moreover safeguards uninterrupted communications. Engineers can monitor real-time operation of the machines, response to faults with shortened time, and plan for preventive maintenance, saving both manpower and costs significantly.

Advantages

- The VT310 offers LTE CAT-M/1 connectivity, ensuring low-power and reliable communications for various commercial duties.
- Featuring highly sensitive GNSS and precise LBS positioning, the VT310 constantly keeps track of the vehicle's location in real time.
- Equipped with IoT OS based accelerometer and strong computing capacity, the VT310 closely monitors the driver's behavior, accurately records risky conducts
  including hard braking, speeding, aggressive cornering, collisions, etc.
- Integrating OBD-II, J1939 and J1708, the VT310 constantly collects vehicle diagnostic data, remotely monitors the vehicle status, reports once an error occurs,
  and facilitates preventive maintenance.
- The VT310 not only supports connection to major IoT cloud services including MS Azure, Google Cloud, Huawei Cloud, etc., but also allows the user
  to connect to their private clouds via HTTP, HTTPS, FTP, MQTT, AMQPS, etc.