mobias

WeLog
AI Edge Development Platform

Processor Unit
- Wifi / Bluetooth
- IMU (6 DOF)
- Cellular Connectivity (2G, 3G, 4G LTE)
- CAN-Bus Module
- Powerful AI Computing Unit

Camera Unit
- Warning Indicator and Speaker
- Forward Facing Camera
- Driver Monitoring Camera (Optional)
- GNSS

Development hardware platform with edge computing capabilities with on-board data

WeLog is a connected and scalable AI Edge Development Platform designed for real-time data processing, sensor integration, and AI algorithm deployment. It serves as a flexible hardware platform for custom software development and application distribution across various industries. Equipped with powerful edge computing capabilities, WeLog can fuse sensor data (such as camera imagery and IMU signals), localization data (including GNSS signals), and in-vehicle network data (such as CAN bus messages) in real time.

As an example of its versatile applications, WeLog can be retrofitted into vehicles to provide ADAS warnings, detect road surface defects, and communicate critical data through V2X technologies to mobile devices and infrastructure. The processed data can be transmitted to cloud or local servers depending on user requirements.

Welog General Specifications

Supported Functions
- Real-timemulti-sensor data acquisition
- AI algorithm deployment and execution at the edge
- Customizable data processing pipelines
- Multi-camera support and real-time video streaming
- Time synchronization across devices
- ADAS warning generation (optional use case)
- Road surface anomaly detection (optional use case)
- V2X communication with mobile devices and infrastructure
- Remote device configuration and software update via mobile app
- Data logging to local storage or transmission to cloud/local servers

Tech Specs
- Micro-SIM, MicroSD card (max 512GB)
- 1080p 30fps image recording
- Real-time video streaming
- CAN-Bus message logging
- OBD-II and J1939 connection (optional)
- LTE Cat 4 module
- GPS 3m precision, IMU with 6 DOF
- Supply Voltage: 9-30V DC (20W)
- Interfaces: 2 × CAN, 2 × USB, 2 × Camera
- Wi-Fi and Bluetooth 4.2 BLE

Data Acquisition

Real-time acquisition and edge processing of sensor data (camera, GNSS, IMU, CAN) using AI-based models.

Remote Data Storage

Storage and management of raw and processed data on local servers or cloud platforms for development and analysis purposes.

Object Detection & Warning

Deployment, execution and real time warning of AI models at the edge for various applications such as ADAS functions, anomaly detection, and predictive analytics.

V2X Communication

Transmission of real-time processed data and warnings to infrastructure, mobile devices, and external systems via internet or V2X communication.
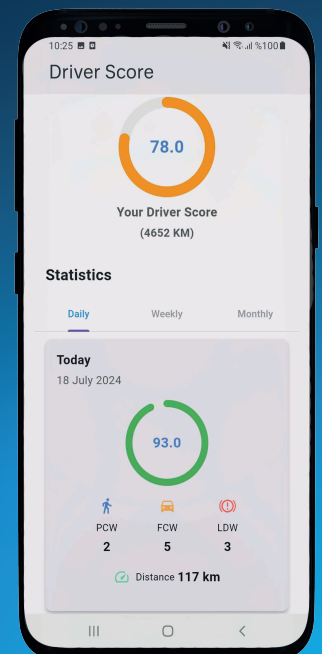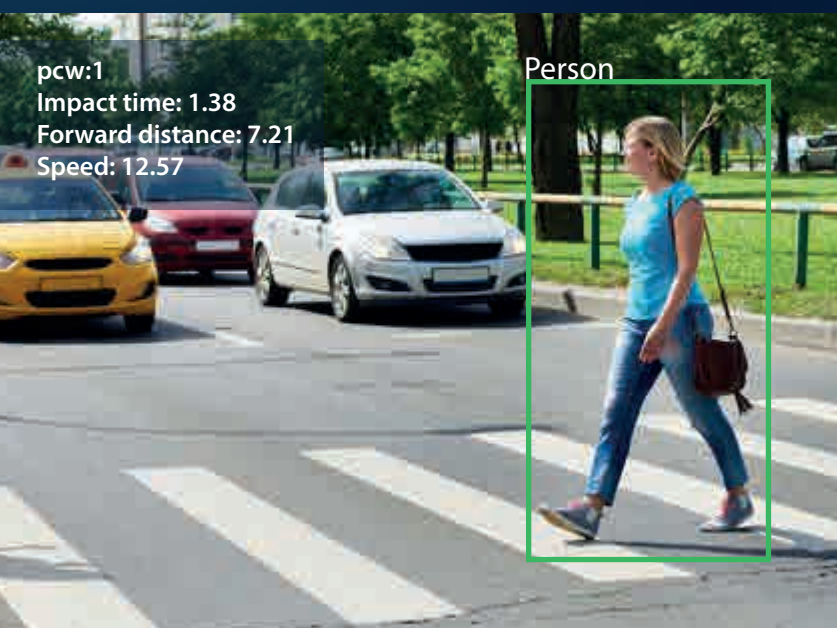
Use Case

- Development hardware platform for new ADAS ideas
- Development hardware platform for in-vehicle edge solution
- Data collection device as also vehicle independent applications

Solution

- AI capable hardware, with CAN Bus, GNSS, camera and LTE capability
- Provides a hardware platform to develop your software
- Pedestrian, forward collision, lane departure warning software included

Application Example: Pedestrian Collision Warning

pcw:1
Impact time: 1.38
Forward distance: 7.21
Speed: 12.57

Person

11:20 WeLogger

PEDESTRAIN COLLISION WARNING

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10:25 Driver Score

78.0

Your Driver Score
(4652 KM)

Statistics

Daily   Weekly   Monthly

Today
18 July 2024

93.0

PCW   FCW   LDW
2   5   3

Distance 117 km