Case Study

High-Bandwidth ADAS Data Logging Solution

for ADAS sensors, incl. camera data, with real-time data tagging

About the Cooperation

Konrad Technologies cooperated with a leading global automotive and technology group known for advanced mobility solutions across passenger, commercial, and industrial sectors to customize a data logging system identical to the one deployed at the customer's site. This solution offers fast and easy-to-access remote troubleshooting to support various sensors, ensuring seamless customer support.

Project Scope

Challenges

- There was no LVDS interface for data logging of camera data in the market when the first project initiated.
- High bandwidth for the data to log in total.
- Different types of ADAS sensors are involved.
- Need to adapt to different vehicle platforms to be tested.
- A robust system is needed for the environment of test drives.

Objectives

- To design and deliver a hardware module to collect LVDS camera data.
- To create a flexible and modular data logging software.
- To ensure the logging of different sensors happen simultaneously with synchronized time stamp.
- To allow the user to monitor the status of the data logging.
- To provide features for tagging the logged data to make the afterwards testing and data analysis more efficient.

Solution

Konrad Technologies developed a data logging system, including data logging software and a LVDS PXI module:

- **KT ADE:** A flexible and modular platform-like software, which loads and manages software modules written in LabVIEW for each type of data to log and which provides a GUI to monitor the status of the date logging.
- **KT FAM:** Konrad Technologies designed LVDS interface PXI module, which can work with NI PXIe FPGA board to collect LVDS camera data.
- **High bandwidth data logging system:** By integrating the hardware and the software made by Konrad Technologies with hardware from NI, Technica and others, the system provides a high bandwidth to collect data from different types of ADAS sensors.
- **Konrad Prelabelling Tool:** Konrad Technologies also designed a software tool, which allows the engineering who sits in the testing vehicle during a test drive to tag the data based on what he sees.

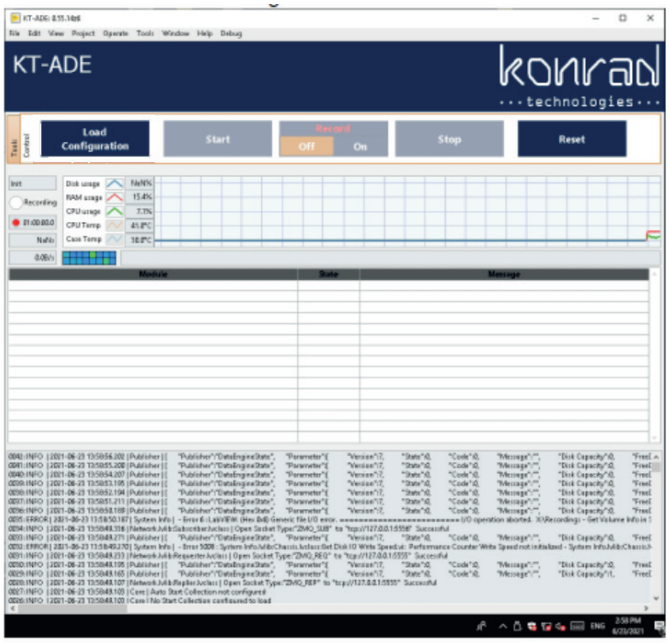
Customer Benefit

Support for different vehicle platforms:

- **Trustworthy system:** Well tested and maintained software made by Konrad Technologies and hardware from Konrad and major measurement hardware providers like NI and Technica ensure a robust system.
- **Streamlined Coordination:** Efficient project management and coordination among various stakeholders minimized delays and facilitated timely project completion.
- **Global Support:** Leveraged Konrad Technologies' international presence for planning, building, and supporting the system worldwide.

Our Know-how

- **Expertise in System Construction:** Advanced knowledge in designing and building custom testing systems.
- **Strong Strength and Willingness to provide RD service for New Demands:** Konrad is able and willing to develop new hardware or software to fulfill some new demands from the customer.
- **Single Point of Contact:** Provided streamlined communication and project management to minimize costs and installation times.
- **International Presence:** Facilitated efficient planning, building, and support of systems globally.



KT-ADE

Deployed PXI based logger in Vehicle

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