Solutions with added value.
Smart PROFINET connection for industry.

In cooperation with Leuze electronic GmbH + Co KG, a PROFINET connection for a camera-based code reader was developed and certified.

The customer
Leuze electronic GmbH + Co KG is a specialised company with established application know-how in the field of sensor solutions for industrial automation. The company has been present on the international market for 50 years and has developed into an established.

The task
A reliable, complete product traceability is essential in packaging technology, automation, robotics and production. For this purpose, the existing product, a DCR 200i camera-based code reader, is to be fitted with a PROFINET connection without hardware modifications.

The existing software platform, based on a Linux system, is to be modified accordingly and certified by an accredited PROFINET test centre. The connection should be implemented in a generic way for several industrial buses.

The solution
According to the specifications of Leuze electronic, a software solution without hardware support had to be identified for the PROFINET connection. Because PROFINET demands high timing, the Linux system must be modified accordingly and the PROFINET data traffic must be prioritised correctly. The modifications were not permitted to affect the already existing product.

The PROFINET interface was connected via a generic interface in order to support other Industrial Ethernet protocols in the future. A modular extension of the system is therefore always possible.

Benefits for the customer

- Cost saving due to identical hardware. The production of the variants is only different in the software.

- Increase efficiency due to the complete outsourcing of the communication stack with the use of universal internal interfaces.

- Added value for the customer team through external inputs and ideas during product development.

- Added value for the client team through external know-how and experience in software development and the takeover of testing and certification.

△ Leuze electronic

Technologies

Software
- Linux API, RT
- Molex Profinet Device-Stack
- NetSNMP-Server

Tools
- Eclipse
- GNU-Toolchain
- Doxygen, Enterprise Architect
- GIT