

**Successful milestone for autonomous driving: Leoni makes key contribution to driverless trucks in series production**

- ATLAS-L4 project funded by the German Federal Ministry for Economic Affairs and Climate Protection successfully completed
- Three years of research as a decisive cornerstone for future series applications for autonomous commercial vehicles on freeways and highways
- Leoni was responsible for the power supply of the wiring harness and automated system

**Kitzingen, 14 May 2025 - The ATLAS-L4 project (Automated Transport between Logistics Centers on Highways at Level 4) has come to a successful conclusion after three years. The aim was to develop a level 4 automated, autonomous truck for hub-to-hub transportation on highways. Thanks to the work of around 150 engineers, this vision became a reality. Leoni made a decisive contribution to securing the energy supply as part of the wiring harness development.**

The project, funded by the German Federal Ministry for Economic Affairs and Climate Protection with almost 60 million euros, focused on the development of safety-relevant components and the creation of a basic concept suitable for industrial use. In addition to Leoni, MAN Truck & Bus, as project lead, Knorr-Bremse, Bosch, Fernride, BTC Embedded Systems, Fraunhofer AISEC, Technische Universität München, Technische Universität Braunschweig, TÜV Süd, Autobahn GmbH and the Würzburg Institute of Transportation Sciences (WIVW GmbH) were involved in the project.

"Autonomous driving will have a major impact on the future of transportation. This is why we decided to become a partner in the ATLAS-L4 project," explains Dr. Matthias Korte, project manager at Leoni. For Europe's largest wiring harness manufacturer, the energy supply of the wiring harness and automation system was the main task. "We were faced

with two crucial questions: what requirements are placed on the electrical power supply in autonomous trucks and what are the implications for the E/E architecture (vehicle electrics and electronics),” says Dr. Matthias Korte. In response to these questions, Leoni developed a high-availability electrical wiring harness as well as power distributors and redundant cable sets.

### **Wiring system must guarantee absolute reliability**

The project team managed to successfully develop and validate the aforementioned solutions. In accordance with the specified architecture, the redundant cable set is based on two independent sub-harnesses and supplies the safety-relevant functions with energy. Both sub-harnesses are capable of autonomous automated driving thanks to the smart distribution of safety-relevant functions and independent energy sources. The central component of the sub-harness is the intelligent power distributor, which uses electronic fuses to guarantee voltage stability when supplying the relevant devices even in the event of serious faults in the system (e.g. short circuit, battery loss).

The result is the confirmed power supply wiring system concept for automated driving, which ensures that there is no feedback between the various channels and the wiring system. The use of intelligent power distributors ensures independence between the sub-harnesses.

### **ATLAS-L4 as the basis for the future**

The successful finalization of ATLAS-L4 creates the basis for future industrial developments and contributes to overcoming the challenges of the driver shortage and increasing transport efficiency. The secure and redundant energy supply provided by Leoni ensures increased system availability and forms a decisive basis for the series production of autonomous trucks. Logistics 4.0 offers great potential: driverless trucks as part of hub-to-hub automation for shuttle journeys between logistics facilities can make an important contribution to greater efficiency and the avoidance of traffic jams and accidents. Automation concepts also offer a solution to the driver shortage that the industry has been suffering from for

years. There is already a shortage of around 100,000 truck drivers in Germany.

### About the Leoni Group

Leoni is a global provider of products, solutions and services for energy and data management in the automotive industry. The value chain ranges from standardized cables and special and data cables to highly complex wiring systems and related components, from development to production. As an innovation partner with distinctive development and systems expertise, Leoni supports its customers on the path to increasingly sustainable and connected mobility concepts, from autonomous driving to alternative drives as well as charging systems. To this end, Leoni is developing next-generation cable solutions and wiring systems that reduce complexity and enable higher levels of automation, for example through zonal architecture. The group of companies employs about 85,000 people in 23 countries and generated consolidated sales of EUR 5.0 billion in 2024.



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