Autonomous Logistics Trial Kit

Experience the power of intelligent machines and speed through autonomous robot vehicles with 5G transmission technology.

Acceleration digitalization of intralogistics with T-System's 5G autonomous logistics solution capable of supporting hybrid transport modes. Enable seamless integration into the open service ecosystem. Together with Ericsson, T-Systems scale up your edge infrastructural capabilities.

About the Autonomous Logistics Trial Kit

T-Systems' Autonomous Logistics Trial Kit (ALTK) is an all-in temporary trial setup for autonomous logistics. The turnkey solution is enabled by an Ericsson 5G network and includes edge computing, ALTK, and software to run your innovation project on your campus. It contains all the components needed to start an innovative project using 5G: an autonomous mobile robot (AMR), a 5G campus network, an edge server, and a framework and software for autonomous logistics. With edge computing, existing SCADA (Supervisory Control and Data Acquisition) and MES/MOM (Manufacturing Execution Systems/ Manufacturing Operations Management) systems can be enhanced.

ALTK comprises autonomous logistic software that processes the data from its sensor network. The process information is further transmitted as control commands for navigation during its transportation activities. Furthermore, processed data is utilized to perform map creation, the configuration of points of interest (like loading and unloading stations, and charging stations), localization of the ALTK, obstacle detection, and avoidance. There is a clear advantage compared to AGVs with wire guidance, reflective markers, etc., where obstacles will stop AGVs.

By continuously comparing sensor data from the ALTK with the map, the ALTK determines its direction of travel. When the sensor data detects a discrepancy between the static map and the current situation, the ALTK concludes that there is a new obstacle.

As a result, the control software calculates a new route based on the changed conditions. Fleets of ALTKs can be managed with this solution. Logistics/transport planning benefits from this information and can optimize fleet movements.

Logistics Trial Kit Integration and deployment

The Trial Kit can be easily deployed without altering existing ICT infrastructure due to its non-interference with the existing infrastructure on the respective enterprise's shopfloor environment. Thus, the out-of-the-box solution can be implemented within a day. It is accompanied by an introduction and training, so that personnel can start with 5G exploration the following day. Throughout the trial runtime, remote expert support is ensured.

In addition, the integration of the Autonomous Logistic solution is easier than using proprietary systems as the solution is built on open standards and technology. Thus, it can co-operate easily with other solutions, and it allows the management of hardware of different providers.

Logistics Trial Kit benefits:

- The trial kit allows the transport of anything on your campus autonomously and enhances your digitalization with features such as obstacle detection, obstacle avoidance, path replanning, map management, POI (points of interest - potential transport destinations) management.

- Flexible and optimized linking of production processes as well as production facilities

- Seamless usage of Autonomous Mobile Robots (AGV/AMRs) for indoor and outdoor material transport

- Efficiency improvement, reduce long-term operation cost

- Improved performance and reliability as well as reduced operational risks

- Assembly is fast, simple, and can be implemented within a day.

- Easily adaptable & integrable to the existing ICT infrastructure

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Autonomous Logistics Trial Kit Packages

Software solutions within the framework of 5G campus networks with an edge infrastructure

When to use?	▶	• When there is a need for optimizing, integrating, automating, and managing all the logistical physical flows of supply, production, and distribution in real-time. • Flexible adaption, and optimized material transport (e.g., avoidance of obstacles through dynamic path planning).
What is included?	▣	▪ 1 light unit load ALTK equipped with 4G/5G* modem ▪ 1 charging station ▪ 1 or 2 passive roller conveyors ▪ Local edge server with pre-installed ALTK control software ▪ Local 4G/5G network server ▪ 4G/5G Tablet for ALTK operation ▪ Deployment period: 4 weeks ▪ Remote expert support * depending on availability of licensed spectrum
How much does it cost?	€	▪ €39.500

Terms & Conditions

▪ This document is for information purpose only and is not a binding offer. If you are interested, we will be happy to send you the relevant contract documents. These also detail the exact content of the service.

▪ The offers are only valid for business customers of T-Systems International GmbH. All prices are net prices quoted exclusive of VAT at the applicable rate.

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