Case Study | Automotive

IoT Solutions for an Automotive Supplier

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Challenge

A global manufacturer of polymer-based products for the automotive, mobility, industrial solutions, furniture and construction sectors was looking for an IoT solution. The main products in the automotive and mobility areas include painted bumper systems for the automotive industry.

Background

The bumpers of a vehicle type can appear in a wide variety of models. For this reason, the conditions for an RFID detection are always varying. Due to the Kathrein software agent used directly on the RFID reader, it is possible to adapt the setting to the changing conditions at any time. Due to the construction type, it is, for example, necessary to increase the power for different bumper types or change the reading profile. In particular, the very complex requirements for a 100 % position determination within the read points in the new materials handling equipment required a precise analysis and the three-dimensional field simulation of the individual identification points in advance.

Solution

Due to the use of an intelligent RFID reader hardware it is possible to install the automatic identification software CrossTalk directly in the RFID reader. The CrossTalk Agent makes it possible to carry out an extremely effecient and decentralised data filtering directly on the read point, sending only relevant data to the corresponding ERP system in different locations.

The combination of hardware and CrossTalk AutoID software created a failure-free solution without any external triggers, thus distinguishing itself in numerous functions from other RFID solutions in the market. Due to new features in the hardware and software, it is possible to precisely track the position and direction of the individual components and assign them to the correct production process. As soon as a transponder on a bumper is captured by one of the reading devices, CrossTalk filters the data and verifies the plausibility. Then the current status of the manufactured product is updated in the ERP system.

Result

The RFID system tracks and identifies each individual component in the various process steps, such as injection moulding, painting and assembly as well as quality control, making a consistent process monitoring across the global production sites possible. Furthermore, the system can be expanded to include components and material from other component suppliers. In total, eight global facilities have been rolled out with the Kathrein portfolio. A total of approximately 700 read points have been successfully operating in the eight production sites since 2012.

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