

Reference report

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About SIGMA

As a renowned system house group, the SIGMA Group acts as a system integrator and partner of renowned providers in the IT sector. The more than 80 employees of the group form a competent team at the locations Chemnitz and Dresden. With know-how, competence and more than 30 years of experience we offer our customers reliable and powerful IT solutions.

About GRAIDWARE®

The AutoID middleware GRAIDWARE® is an intelligent abstraction layer for different hardware components and business applications. Work tools, production steps and AutoID data can be identified, monitored, controlled and configured.

About the Customer

The PaX Group has been developing and manufacturing high-quality window and door systems "Made in Germany" since 1984. At several locations in Germany, the company creates custom solutions made of plastic, wood, aluminum, and wood-aluminum combinations. With its PaX Classic brand, the company is one of the leading providers of period-style wooden windows for historic buildings, combining a traditional look with modern requirements for security, comfort, and energy efficiency.

Modern RFID Infrastructure for Window Manufacturing



www.pax.de

Future-Proof Production Processes at PaX Classic GmbH

In collaboration with SIGMA Enterprise Solutions, PaX Classic GmbH modernized its existing RFID infrastructure in the manufacturing area and migrated it to a new, high-performance hardware and software platform. The goal was to create a robust, practical, and long-term maintainable solution for industrial use, integrated into existing production processes.

Initial Situation and Challenges

PaX Classic GmbH has been successfully using RFID technology to support its production processes for many years. However, as the infrastructure in use aged, the need for technical modernization arose.

The focus was particularly on:

- replacing existing legacy equipment with modern RFID hardware
- improving durability at manufacturing workstations
- integrating new components into existing applications
- converting the printing process

The goal was to find a solution that would integrate seamlessly into the existing system landscape while also withstanding the demands of industrial manufacturing over the long term.

Selection of Industrial-Grade RFID Hardware for Manufacturing Applications

In collaboration with SIGMA Enterprise Solutions, a structured selection of suitable RFID components was carried out. The following criteria were of particular focus:

- Rugged design for use in production environments
- User-friendliness for manufacturing workstations
- Long-term availability of the hardware platform
- Ability to integrate into existing IT infrastructures

Through close coordination between PaX and SIGMA, a new hardware platform was selected that is based on current industrial models and ensures long-term availability as well as a reliable supply of replacement parts. This provides PaX with a stable technological foundation for the sustainable use of RFID technology in manufacturing.

Thanks to SIGMA's expertise as an RFID system integrator, the selected hardware was commissioned smoothly and without the need for middleware.

Specially provided client software enabled the direct connection of the RFID readers—without additional infrastructure components and with minimal integration effort for the customer.

New Printing Processes Using GRAIDWARE and a State-of-the-Art Industrial Printer

A key component of the modernization was the implementation of a new printing process based on GRAIDWARE in combination with a state-of-the-art industrial device platform from Toshiba.

The new solution supports the end-to-end use of RFID technology throughout the production processes and, at the same time, increases operational reliability in day-to-day operations.

Future-proof RFID technology for long-term production stability

The modernization of the infrastructure ensures that PaX can continue to rely on proven RFID-based process support in manufacturing in the future.

Production workstations benefit in particular from:

- increased system stability
- modern and robust hardware
- long-term investment security

The new infrastructure has laid a solid technological foundation on which future expansions of production digitization can be built.

This is what our customer says...

“For us, it was crucial to migrate our existing RFID infrastructure to a modern hardware platform that would be available for the long term. Together with SIGMA, we were able to implement a solution that integrates well into our existing system landscape and operates reliably in day-to-day production.”

Dirk Wachsmuth, IT-Director, PaX AG