



▶ Scalable solutions for production control and monitoring

Use Case

Seamless recording, management and backup of comprehensive operating statuses susietec SecureOS

susietec SecureOS supports companies in recording, managing and backing up complex data sets.

The aim of this project was to ensure a complete record of the operating statuses of various pumps. Special care needs to be taken during data recording and evaluation because of the various ways specific operating conditions affect the operation of the pump.

The ability to instantly transfer the collected data to the cloud or export it over the network or using USB provides additional flexibility.

In addition, the local visualization of the data set simplifies the commissioning of the pump as well as the wiring of the sensors. Additional functions such as an emergency shutdown and signaling errors are also part of the software's range of functions.

The susietec products

- ▶ SecureOS
- ▶ Remoting
- ▶ ToolCommander[®]

The challenge

- ▶ Customer-specific hardware based on imx6ull
- ▶ Very flexible set-ups in the field (LTE, WiFi, LAN, SD card)
- ▶ Showing service technicians how to set up the pump

The solution

- ▶ Modified susietec SecureOS software without cloud management
- ▶ Cloud-based and local data processing
- ▶ Simple and user-friendly WYSIWYG configuration

The result

- ▶ Flexible solution consisting of hardware and software
- ▶ Data recording also possible for two years without internet connection
- ▶ Recording of operating parameters with automatic alarm and error signaling



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Technical details of the project

Cost-optimized hardware has been implemented for this project. The central functions of susietec SecureOS such as the redundant operating system rollback are transferred to a small emmc memory for two years.

In addition, the solution includes its own local dashboards for local evaluation, data export, configuration of the alarm relays depending on sensors, functions and set limit values, as well as a switch-on delay and alarm duration.

Technical implementation of the project

The basis for the technical implementation of the project is a custom board based on an IMX6ull, which was extended with a modified SecureOS for ARM boot loader. The K-PORT server included provides appropriate software updates. The service technician can select the required software version using the device on-site. This not only eliminates the need to register the device, but also the need for a complex infrastructure with IT management for user administration. This results in significantly lower OPEX compared to other IoT scenarios.

susietec SecureOS provides detailed insights into the operating statuses of the pumps and guarantees continuous monitoring during operation. Smart additional functions such as automated emergency shutdown prevent a pump from being damaged or destroyed. In addition, regular security updates protect the products against new threats from the internet.

SecureOS is developed and implemented during each project phase in close cooperation with the customer. The SecureOS update function enables all participants to change to the latest release and provide immediate feedback.

Contact

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Customer key figures

- ▶ Leading global supplier of positive displacement pumps with an international service network for industrial and municipal plant operators
- ▶ Support provided to customers even after SecureOS has started running to ensure 100% satisfaction
- ▶ Reliable and competent care provided by more than 2,000 employees at five development and production sites as well as 35 sales subsidiaries, a cooperation partner in Japan and over 200 representatives worldwide
- ▶ Delivering the highest specification products to achieve excellent results for every customer

About susietec

We see digital transformation as a holistic approach. With the susietec toolset, we support companies in working out the potential of IoT and digitalization: The combination of software, hardware and know-how enables functional and smart solutions for equipment suppliers, providers and manufacturers. That is how we succeed in implementing purpose-driven changes effectively – with the aim of driving forward digitalization in the long term.

susietec solutions can be used in an existing environment and also provide a basis for the new development of machines, components and production plants.

In the association of Kontron companies we help you take the right steps towards digital transformation using our experience from numerous digitalization projects.

For more information, please visit:
[susietec.com](https://www.susietec.com)

