The challenge

Founded in 1917 and headquartered in Goldach, Switzerland, Kellenberger Switzerland AG is a leading global manufacturer of precision machines for turning, coordinate turning, hard turning and milling. In the course of digitising and networking its manufacturing solutions, the company faced a decisive challenge:

The existing gateways, which were operated on the machine control computers (IPC), had reached their limits. With the introduction of **Docker-based applications** – particularly in connection with the new **UMATI gateway** for standardised OPC UA communication – Kellenberger needed a flexible, secure and high-performance platform to efficiently process machine and operating data and transfer it to external servers.

At the same time, the solution had to be **easily scalable** and implementable on all new machines **without additional hardware costs**.

The solution

The **IRF3421 industrial router from ADS-TEC Industrial IT** was chosen, as it perfectly met the requirements thanks to its integrated **Docker runtime**.

The UMATI gateway runs on the IRF3421 in a Docker container, which collects machine data via **OPC UA** and transmits it via **MQTT** to a server, where it is visualised on the umati.app web platform. This relieved the IPC of the additional computing load and at the same time ensured the separation between the machine and customer networks via the IRF's integrated **firewall and routing functions**.

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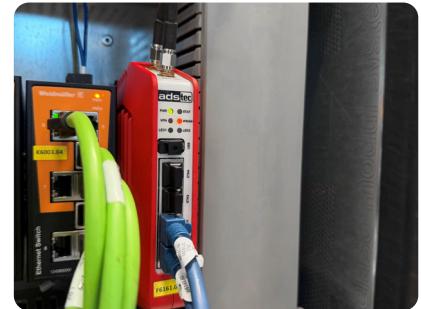
The implementation was carried out in close cooperation between software developer **Emre Kocabay** and product owner **Stephan Schweizer**. In just around **40 hours**, the system was set up, configured and successfully tested – including the installation of Portainer, the creation of the container image and the integration of the required certificates.

Thanks to ADS-TECs familiar network architecture, the existing machine infrastructure could be retained, enabling smooth and efficient integration.

The success

With the new solution, Kellenberger is able to make its machine connectivity modern, secure and future-proof – with minimal effort.

The solution has already been successfully presented at **EMO 2025** and impressively demonstrates the performance of ADS-TEC technology in industrial environments.

The biggest advantages include:

- **Relief of the IPC** by outsourcing the gateway processes to the router, which ensures the operation of the software in its environment at the highest security level

- **Full control over data traffic** thanks to integrated packet filtering – the data flow between components and control can be controlled and monitored directly via the firewall

- **Easy maintenance and administration** of Docker Host via Portainer

- **Increased system security** through network separation

- **Flexible scalability** for use in new machines

In the future, Kellenberger plans to further expand the solution in order to also meet the criteria of the **Cyber Resilience Act (CRA)** with the help of ADS-TEC IRF technology.

„We know what we have in the products and functions of ADS-TEC Industrial IT. The trust in the technology and the cooperative partnership create real added value – also for our own products."
– Stephan Schweizer, Product Owner Applikationen, Kellenberger.