Internet of Things at Weinig
Big-Lin**X**® and firewalls in wood processing

Michael Weinig AG of Tauberbischofsheim is the world's largest manufacturer and full-range supplier of solid wood processing machines and systems. The portfolio of solutions offered ranges from single machines to complex production lines. In all cases the focus is on maximum value creation via networked production. Weinig's aim is digitalisation offerings that are as well-integrated as possible. To realise this, the company uses IRF1000 and 2000 series firewalls for the machines and Big-LinX as a remote maintenance platform. And here, ADS-TEC proves to be the ideal partner.

The head of LifeTime Services, Weinig AG Group, Andreas Doikas, is convinced by the ADS-TEC solution:

„Thanks to Big-LinX and the ADS-TEC firewall, we are able to grant the remote capability of our producer plants for solid wood processing machines, independent of the operating system. With the Big-LinX portal we currently manage more than 1,800 plants and machines worldwide. With ADS-TEC we have found a reliable, secure partner who gives us the chance to grant LifeTime Services. This is one of many building blocks on our way to a continuous digitalisation of the service experience for our customers and installed base."

Weinig uses **remote maintenance and monitoring** to access plant and machinery relevant to the company via the user control system from anywhere, including decentralised service locations. Even with outdated operating systems, it is possible to carry out remote service by the Weinig experts without risk to the customer's network. This makes a significant contribution to reducing expensive downtimes for customers in the future.

All functions for controlling the machine are available to the woodworker via an app. One more tap on the machine and he is with his desired contact person with targeted precision. He can access the machine monitor just as easily; here he can call up all the information about the operational readiness of his machines. The central **IIoT platform Big-LinX** from ADS-TEC is currently connected to 1,800 machines and systems at Weinig and ensures global networking.

When machines go onto the internet and into an increasingly networked world, they must also be protected appropriately. This is one of the crucial tasks of the **firewalls** that are connected both to Big-LinX and to the Weinig control systems. Weinig has been using ADS-TEC's security solution with Big-LinX and first-generation firewalls successfully for many years. The system was expanded in 2014 when the new **IRF2601** series and new remote functions of the Big-LinX IIoT platform were added. Since 2020, a further large number of **IRF1401** firewalls have gone into use at Weinig to meet the growing challenges of Industry 4.0.

The special feature of the security concept of the ADS-TEC solution is its complexity. Based on crypto smartcards, such as are also used in banking, and on elaborate data filter functions and a sophisticated access rights allocation, this is a solution of the highest level. Last but not least, the server for the platform is operated in the EU. The damage caused by attacks can be very high right away, which is why security is of central importance, if only because of the duty of care that customers must fulfil in the event of damage.

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Also interesting are the economic aspects for increasing efficiency that customers like Weinig can achieve through remote operation. Machine downtimes can be reduced or even avoided. Preventive and direct measures save cost-intensive service visits, which often involve long distances with expensive travel and take up a lot of time. On top of this, a good remote maintenance concept can also extend the lifetime of a machine. And in the end, the objective is not only economic efficiency, but also sustainability – also an important aspect in times when good CO_2 balances are in demand.

The ADS-TEC solution offers customers future security in various respects and the portal grows with the needs of the customers. In this way, the digitalisation of a company can be constantly expanded. With Big-LinX plus firewalls, highly complex processes can be mastered securely and easily so that efficient and customised production is obtained. Weinig has long since made the leap into Industry 4.0 and is constantly expanding its capabilities in this area.

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