Success Story
Factory Automation

Kontron AIS GmbH

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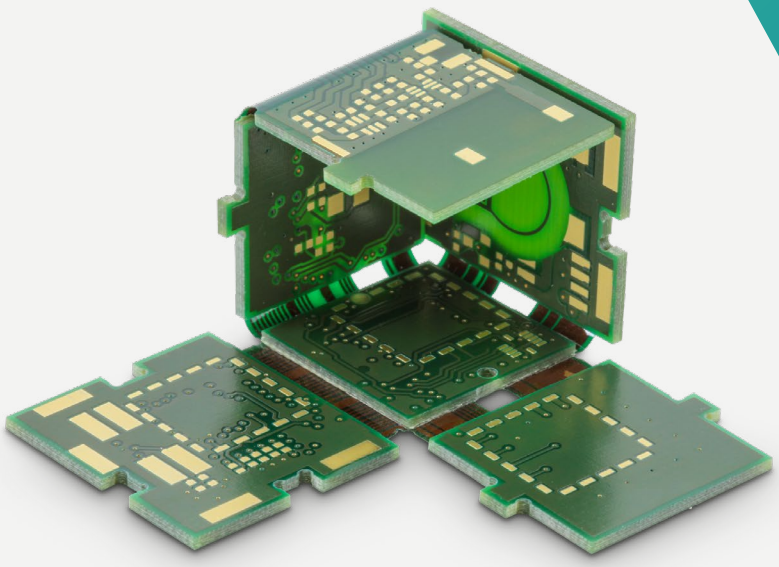
The Power of IoT

Increased Productivity with FabEagle®MES Thanks to Transparency in Manufacturing



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"FabEagle® gives us a suitable and important stepping stone on the way to Industry 4.0 and thus to greater efficiency."

Klaus Faller,
Digital Office | Processes
Würth Elektronik

WÜRTH ELEKTRONIK

FabEagle®MES

Würth Elektronik GmbH & Co. KG
Würth Electronic
Circuit Board Technology

Platform:
FabEagle®MES, FabEagle®Connect

Project:
MES for circuit board production

Kontron AIS services:
Consulting, customizing, equipment integration, installation, training, support

Goals

- Visualize production in the web portal
- Identify and eliminate sources of errors
- Record throughput data

Challenge

- Status information missing for some machines
- Retrofit missing interfaces by the machine manufacturer
- Insufficient labeling of materials

Result

- Presentation and analysis of alarm, status and process data in the web portal
- Principal sources of faults can be identified
- Error frequency reduced by over 50 %

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Würth Elektronik GmbH & Co. KG uses FabEagle®MES software for production. The step of applying solder resist in the production of circuit boards was chosen as the pilot project for integrating the MES in which 7 process- and 15 material handling equipment were involved.

In a first step, machine data such as alarms and machine status was visualized. The findings enable Würth Elektronik to identify potential for optimization in production. Later on, KPIs for throughput, process values and material flow were added to the project. Following successful completion of the pilot project, FabEagle®MES was connected to the superordinate ERP level and the production areas throughhole-plating, lamination and mechanical processing were integrated in subsequent project phases.

Steps to success

To start the project, only the alarm data collected in a database by the machines was displayed in a web interface. The equipment status could now be deduced from the alarm data gathered and added to the web presentation. The information gained proved extremely useful even at this early stage, which prompted Würth Elektronik to integrate the machines and handling systems via standardized interfaces so that correct status information could be obtained in addition to the alarms in order to trace the material flow and collect material data. All this information is displayed on a dashboard and can be filtered, arranged and combined according to various criteria.

The information shown can now be used to detect common faults and eliminate their causes. This has led to improved equipment availability. Product defects can now be analyzed more effectively and largely avoided in future by means of process improvements.

Horizontal line for the metallization of holes with the processes deburring, cleaning and desmear, chemical and galvanic copper deposition

About Würth Elektronik GmbH & Co. KG

Founded in 1971, Würth Elektronik Circuit Board Technology (CBT) is now Europe's leading manufacturer of printed circuit boards. The company has three production sites in Germany and also works with qualified production partners in Asia. Basic technologies, complex HDI circuit boards or high-end Star-flex-boards are produced to customer specifications as prototypes or samples, in medium or large series. In addition, the company qualifies as a pioneer in the market with its development of innovative product technologies.

Würth Elektronik group of companies has its head oces in Niedernhall (Hohenlohe), Germany, employs approximately 8,000 people around the world and posts turnover of roughly EUR 1 billion. With its 16 production sites worldwide, Würth Elektronik is among the most successful companies in the Würth group.

For more information please visit: **www.we-online.de**

About Kontron AIS GmbH

We set the benchmark in industrial software – for more than 30 years and with an experienced team of over 200 employees. Our proven software products and customized digitalization solutions enable machine and equipment builders as well as factory operators to break new ground in automation and secure long-term competitive advantages. Together with our customers we implement worldwide cross-industry, intelligent digitalization strategies and solutions for the smart manufacturing of tomorrow.

As a subsidiary of the Kontron AG, we offer integrated, end-to-end IoT concepts consisting of hardware and software as well as worldwide project management, service, and support thanks to a global network.

For more information please visit: **www.kontron-ais.com**