



Photo: KUKA

Zollner Elektronik AG achievement:  
Technical consultation in development and  
test concept creation. Sample production.  
Industrial Engineering. Serial production.

## Success Story: **KUKA**

### “Zollner is a key supplier of electronic assemblies to KUKA”

Collaboration that crosses technologies in Electronics, Mechanics and Industrial Engineering

#### Customer and product:

KUKA is an internationally active automation company with revenues of around four billion Euros and about 15,000 employees. The company headquarters is in Augsburg. As one of the leading global providers of intelligent automation solutions, KUKA offers its customer everything under one roof. From robots and cells to fully automated systems and their networking - particularly in markets like the automotive sector with focus on e-mobility & batteries, electronics, metal & plastic, consumer goods, e-commerce, retail and healthcare.

Zollner Elektronik AG is a key supplier of electronic assemblies that will be installed in the newest generation of KUKA

robot controls. Here we are working on the industrial robot control unit, KR C5, as well as the more compact model, the KR C5 micro, which is used in many KUKA robots.

With that, KUKA and Zollner are expanding the business relationship that has existed since 2011 into a strategic partnership on a global level: thus, the Romanian Zollner plant in Satu Mare supplies assemblies to the KUKA location in Hungary. The final production of electronic control devices that are destined for robots that are constructed at the KUKA headquarters in Augsburg takes place there. KUKA China, on the other hand, gets its assemblies from the Zollner plant in Taicang.

#### What was the main challenge for the project?

Alongside the many advantages that global project teams have, there was, however, one central challenge that needed to be overcome - communication. These complex products

require a large amount of coordination, both within Zollner departments and at KUKA, which in the start-up phase in particular was in part only possible virtually.

Also, several technical changes and adaptations were made during the course of the sample phase and in production processes as well. Additionally, the project demanded diverse complex and comprehensive testing of the product with in-circuit test (ICT), boundary scan and functional testing as well as numerous analyses and investigations.

One fascinating task was also implementing the project globally, both in Satu Mare and in China, with identical parameters and transfer of the samples into the serial production phase in connection with the transfer to Romania and China.

## What solution did Zollner find?

Zollner Elektronik AG enabled communication in every direction in order to generate collective innovative ideas and keep workflows and production sequences transparent. Routine meetings and coordination, both in the Zollner project team and with KUKA, helped creating more flexible structuring of the project possible. Through this close cooperation, Zollner, together with KUKA and colleagues, was able to develop specific cross-location solutions.

The EMS provider uses synergies across all specialist departments, through which the company was able to draw on the know-how for the project from experts in their fields, like Analysis Technology, and from that open new potentials.

In workshops with KUKA and Zollner Research & Development and Test Engineering departments, a comprehensive and individual testing concept could be developed to be able to test individual boards in their later functions and ensure a high level of product quality.

Zollner not only collaborated in the development of the test strategy and/or test specification at an early stage, it also took over the entire realization of the test systems. Together with a strong network of partners, the highly complex test systems and fixtures were constructed, finished and made verifiable. The flexibility in sample/prototype production is to be specially highlighted - specifications were still being developed and incorporated in part during ongoing production. In the sense of our Local-for-Local strategy, preserial production or samples parts were produced, for example, in Untergschwandt due to its proximity to Augsburg, thus Zollner offers an efficient production solution close to the customer and in the end user's region.

Team members from Germany, Romania and China collaborated cross-border to ensure globally standardized production and test processes. In order to keep to the tight timeline for the project, Zollner turned back to its already proven processes and provided the documentation on the basis of the drawings from the Zollner-controlled NPI process together with the customer.

## This is what our customer says about the collaboration:



Photo: KUKA

*"Strategic collaboration at the same level was important to us due to the complexity and cost goals of the project. We selected Zollner because the company is known for thinking in new directions and developing and implementing reliable solutions in this way; but it is also due to its global locations and the close communication between on-site teams, who always supported us with innovative ideas and thinking outside the box. With Zollner we are thankful to have such an excellent partner at our side and to take an important step into the future."*

Axel Merkel, Head of strategy electronic component sourcing  
Division Robotics, KUKA

