

Ready for Future Production

*KUKA chooses atvise® to be the
new visualization system for its cell4 range*

KUKA AG, based in Augsburg (Germany), is one of the world's leading suppliers of intelligent automation solutions. In the company's search for a generic visualization system to cater to its various application cases, KUKA carried out a comprehensive benchmarking process for all the potential manufacturers. The company that triumphed was Bachmann Visutec GmbH with its atvise® solution.

KUKA offers a vast range of products and services, spanning robot systems with various payload capacities and reaches, complete manufacturing cells, and ready-to-use production systems. This makes KUKA a highly sought-out partner in the area of automation and the intelligent optimization of industrial production processes. One thing is always crucial: making people's life easier by simplifying their work.

“Usability” is crucial

Ensuring that solutions are user-friendly is always our primary concern: “Ease of use and quick, intuitive system navigation – the ‘usability’ – are decisive factors when it comes to machine efficiency and availability,” says Stefan Kuppelwieser, Vice President for Strategic Engineering at KUKA Deutschland GmbH and Head of the cell4 range for different production technologies. This is because production processes are becoming increasingly complex and entail lots of different stages.

To this effect, networked production environments require intelligent and open interfaces to the machines. To produce smaller batch sizes, the production cells have to be highly flexible in the way they operate – as do the people using the cells.

Consequently, the associated visualization technology has to meet equally high requirements. The system must be quick and easy to navigate, intuitive to use, and in the event of a failure, users should be able to intervene within a matter of minutes. This requires the visualization system to be open in all directions, relevant information to be displayed consistently and uniformly, and access to be managed securely and reliably. In terms of the latter, users' individual access rights (as a technician, operator or maintenance personnel) are granted centrally, making the system more secure to use. Last but not least, the statistics must be displayed clearly and always include the relevant performance indicators for optimizing the system and maximizing utilization.

ADVANTAGES OF atvise® FOR KUKA

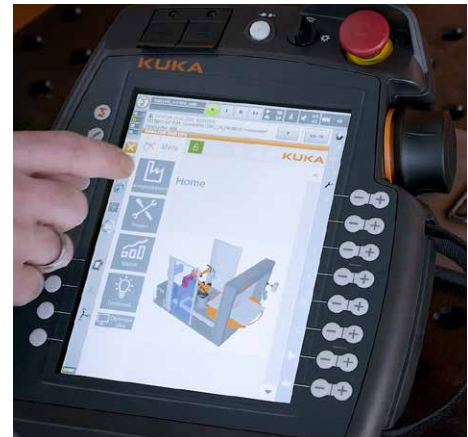
- *Flexible use thanks to manufacturer-independent visualization*
- *Use of various different operating units by means of pure web technology*
- *Implementation of state-of-the-art operating concepts, incl. responsive design*
- *Standardized data connection thanks to OPC UA Companion Specifications*
- *Seamless integration into existing solutions*
- *Customized modifications with easy-to-use modular system*
- *Integration of 3D animation*
- *Fast analysis possibilities*

KUKA

- *KUKA is one of the world's leading automation specialists. Based in Augsburg (Germany), the company has more than 14,000 employees, and in 2019 generated sales of around 3.2 billion euros.*

KUKA CELL4_PRODUCTION

- *KUKA cell4_production cells are modular, pre-configured manufacturing cells that can be used for all manner of production processes. Thanks to atvise®, the modular cell concept can be integrated into existing production processes and environments and quickly adapted when production and market requirements change.*



Visualization of a KUKA cell4_production manufacturing cell



»Usability' is a decisive factor when it comes to machine efficiency and availability.«

Stefan Kuppelwieser

Vice President for Strategic Engineering,
KUKA Deutschland GmbH

One for all

KUKA Deutschland GmbH wanted to streamline its extensive range of visualization systems and with this, set new benchmarks in terms of usability and openness. The resulting list of requirements was extremely long and included platform-independent – and thus hardware-independent – implementation, open architecture and interfaces, and scalability. The use of state-of-the-art technologies, such as HTML5 and OPC UA, and a structured, user-friendly development environment underscored KUKA's aspiration to develop a solution with long-term viability.

“In order to evaluate the systems available on the market, we compiled a comprehensive checklist together with our development departments,” says Dominik Jenning from Strategic Engineering, explaining their approach. This list of requirements was sent to the manufacturers, and following a pre-selection stage, the three most promising candidates were asked to substantiate the viability of their proposed solution to satisfy KUKA's specified functional requirements.

A clear decision: atvise®

“We spent a long time testing the proposed solutions, and in the end atvise® from Bachmann Visutech stood out to us as the clear winner,” says Stefan Kuppelwieser. KUKA was impressed by a number of details – both small and large – and in particular by the approach to developing the final solution: “Some additional clarifications, were resolved together with the Bachmann team,” says Kuppelwieser, praising their collaborative working relationship.

This resulted in new opportunities for KUKA that hadn't been a consideration when the original requirements list was drawn up. Now, specific OPC UA methods simplify the interoperability within and outside of the production cell.

Thanks to the pure web-technology user interfaces realized with atvise®, the responsive design will make the systems easier for users and the KUKA development department to use: whether using a SmartPad on the machine or a high-end HMI, the information is displayed uniformly to the user – without additional work and expense. The development environment is part of the cell's scope of delivery, meaning that the customer can implement new requirements in the cell4_production process themselves.

Moreover, the openness of atvise® means that the interactive, three-dimensional view of the entire production cell in the visualization will make operation and maintenance even easier for users in the future.

Mission accomplished

“Thanks to the new visualization solution, KUKA now has a brand new, unprecedented ‘touch-and-feel’ system,” says Kuppelwieser. The flexibility, usability and maintainability of the machine and production cell have reached a new dimension. This makes systems more viable for the long term, increases their availability, reduces costs, and puts KUKA a decisive step ahead of the competition. Mission accomplished!

atvise® FACTBOX

- Fully functional web visualization
- Several process interfaces available
- Convenient engineering tool
- Unrestricted freedom in user interface design
- Very short development cycles at low costs

▼ KUKA cell4_production cells are modular, scalable manufacturing cells. The HMI is based on atvise®.



FIND OUT MORE:

www.atvise.com



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