

Project Note

New generation of surgical microscopes

The new product generation is more compact, more reliable, and more modern. Zühlke drew on its experience and the latest in technical knowledge to coach the manufacturer's development team to the series production stage.

Task

This project involved Leica Microsystems, a developer and seller of medical microscopes. The company wanted to replace its current product line with a new generation of devices. One goal was to miniaturize and modernize the electronic components. Another was to devise a more reliable design for the entire system.

A CAN bus continued to network the individual system components, as before. Zühlke's task was to develop the following electronic modules:

- Zoom drive
- Focus drive
- X-drive, Y-drive
- Control system for lighting

Implementation

Together with the customer's developers, Zühlke specialists evaluated the electronic modules being used in the current product line. Some of these components were incorporated in the new product generation.

The interdisciplinary team defined the interfaces of the new modules and developed miniaturized electronic components. The entire mechanical system had to be taken into account in the process. New drives that operated quietly and smoothly made the new devices more comfortable to use for physicians. Key priorities in all these efforts were the device's safety functions. Zühlke developed the sub-systems to the series production stage and helped the company to roll out the production operations.



Technical Data

Micro controller
DSP

Customer benefits

- Drawing on years of experience in development of electronic components, Zühlke was able to help devise a compact and reliable drive system.
- Support from an external specialist for the project team enabled the customer to make use of new technologies and allowed its development team to attend to the product at the same time.

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