

CADSTAR™

CADSTAR is a complete design environment for PCB design – from initial concept through to product realization.



High-Speed Design Powered by Zuken's CADSTAR Solution at **Xyco**

xyco technologies AG
We accelerate progress.

“CADSTAR is the only solution that gives us the high performance, high-speed approach realized in software at an affordable price.”

Manfred Jendry,
Xyco Technologies AG

High-Speed Design Powered by Zuken's CADSTAR Solution at *Xyco*

High-tech electronics outsourcing company Xyco uses Zuken's CADSTAR PCB software to support their customers with leading edge high-speed technology.

Xyco, also known as Xyco Technologies AG, was founded in 2000. The company, based in Aachen Germany, is headed up by Manfred Jendry and is a high-tech service provider and full service contractor for electronic devices and systems. Under this umbrella, they are able to support companies in outsourcing electronics design and manufacture from initial product conception, through development, engineering, testing and production, onto the logistics of product distribution.

Their main objective is to help companies "accelerate progress", in order to assist them in getting products to market in the shortest time possible. They are serving customers that are not necessarily technology aggressive and are looking for a partner to fill their products with high performance emerging technology. Typical products include an anesthetic dispensing system for a medical systems

manufacturer, and a communications system for police cars.

As a company that is founded on delivering cutting edge innovative solutions, they are always dealing with the latest technology, particularly for high performance computing – such as PCI Express, DDR3 and flash memory. The rapid adoption of these multi-gigabit PCBs and all the issues associated with high-speed design, including signal integrity, had become one of Xyco's biggest design challenges back in 2009. They fast began to appreciate that they could no longer get reliable results from simple post-layout analysis and find-and-fix approaches. For some time Xyco had been feeling somewhat dissatisfied with the ability of their PCB design software to deal with the everyday issues associated with designing with faster and faster technology, such as impedance control and differential pairs.

Results

- By using CADSTAR, Xyco were able to overcome all the high performance computing challenges associated with signal integrity, verification and routing.
- Xyco recently designed an in-car communications system for police and rescue vehicles using CADSTAR.

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Xyco demanded a more integrated holistic approach that would build signal integrity capabilities into their design flow, enabling verification and analysis to take place concurrently.

In the summer of 2009 they started the search for an ECAD supplier that could provide the right software technology and consultative support to help them keep pace with the latest cutting edge technology. All while being at the right price. After searching the market, they chose CADSTAR for its high-end design capabilities for signal integrity verification and high-speed routing. The design reuse functionality was also a key deciding factor for choosing CADSTAR.

CADSTAR is Zuken's powerful PCB design solution that follows an intuitive work flow, guiding designers easily through their design process. It incorporates all the technologies necessary for a complete electronic development process in a single environment.

The range of the solution includes schematics, board- and FPGA-level system design, PCB layout, high-speed and signal integrity analysis, 3D, and creation of manufacturing output, complemented by complete data management capabilities and extensive internet-accessible libraries containing more than 250,000 components.

Police Car Communications Device

After being approached by a leading automotive supplier, Xyco recently designed an in-car communications system for police and rescue vehicles using CADSTAR. The product was to enable people in the vehicles to directly communicate with their central office or control station, sharing data and live streaming video of activity going on around them. It consisted of two elements, a communications computer connected via a PCI Express cable running at 2.5GB/s to a human machine interface (HMI) display unit mounted next to the driver. Using the PCI Express cable they were able to make the HMI interact in the same way as the main computer, making it easier to manage. By using CADSTAR they were able to overcome all the high performance computing challenges associated with signal integrity, verification and routing.

CADSTAR Boosts Innovation Capabilities

By making the transition to CADSTAR, Xyco has been able to significantly advance their innovation capabilities. CADSTAR is pivotal to maintaining the company's competitive edge.

"The very strong constraint management capabilities for signal integrity, ability to carry out differential routing, and thorough verification within CADSTAR has been instrumental in helping us efficiently handle the latest high performance computing technology. Without this software, designing the police car communications device would have been a lengthy time consuming project,"

Manfred Jendry, Xyco Technologies AG

