

*You will find us at Embedded World  
2016 in hall 4A / 4A-126*

**solectrix**  
high end electronics solutions  
Solectrix GmbH  
Fürther Str. 244b ‚Auf AEG‘  
11, 90429 Nuremberg  
Fon: 0911 - 30 91 61 - 0  
Fax: 0911 - 30 91 61 - 99  
info@solectrix.de

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## **Standard FPGA SoMs, surround camera systems and LED heating for diagnostic equipment**

### **Solectrix presents innovations for automotive, medical and digital film production at Embedded World 2015**

For the first time, the Nuremberg experts for high performance image data processing by Solectrix present a unique test system for surround camera systems for vehicles on the Embedded World 2016 in Nuremberg. Furthermore, a strong image HD 360° Virtual Reality Rig on the base of SinaCam, new applications for System-on-module components according to SMARC standard, as well as a LED heater with contactless data readout for medical applications are part of the Solectrix exhibition program 2016.

### **'K7' SoM system on SMARC standard modules**

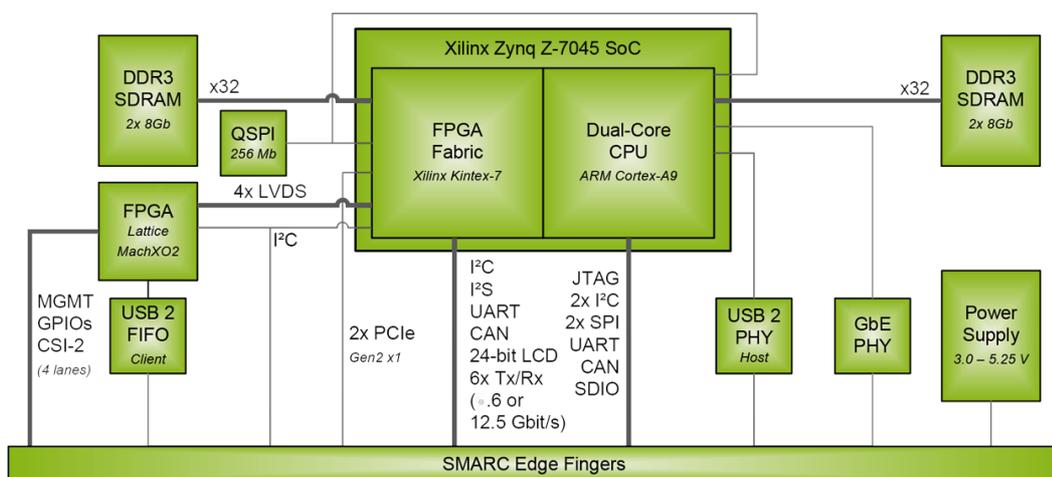
Whether in the tiny camera heads of the action miniature camera sinaCAM, in innovative medical instruments, camera systems for the automotive industry or industrial projects – due to their programmability and flexibility the FPGAs have been part of the hardware design of Solectrix GmbH for years. Also the Nuremberg experts for digital image processing and high end embedded electronics will take the opportunity of the Embedded World 2016 to thrill with new combined CPU and FPGA modules. They stuck to the SMARC standard - meanwhile 2.0 - with the new SXoM 'K7".

Cooperation partner for the development and marketing of the SXoM module is the company Congatec from Deggendorf - a leading provider of industrial computer modules on the standard form factors Qseven, COM Express, XTX and ETX, as well as for single-board computers and ODM services.

The SXoM-K7 Board was developed to serve as a modular platform for high-performance DSP applications, which combine true real-time data processing and network solutions. Its heart is a Xilinx Zynq Z-7045 SoC with KINTEX-7 FPGA and 350 K logic elements with ARM dual core processor up to 1 GHz, which is also suitable for the processing of 4K video data and for grouping of other complex communication data streams.

Further areas of application are motion capturing and analysis, medical data imaging, security and surveillance, high end machine surveillance and traffic monitoring.

*Image: Full computing power! The SXoM-K7*



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## ***High-end surround camera systems for cinema and automotive***

In addition to high-performance modules, the team of Solectrix GmbH still cares about the further development of its ultra-small and very light 2D/3D-HD-SinaCam and 2D-SinaCam Light (LT) with only 160 g , based on which a new 360° degree Virtual Reality Rig in full cinematic quality is ready for testing at the this year's Embedded Word.



The tiny HD Professional camera SinaCam in this device is able to fully show her well known, unique features, which are popular among filmmakers: The 2/3" CCD sensor, the large dynamics width (13.5f-stops), the 14-bit image processing, up to 60 fps frame rate and the simple

connection and remote control via only one single-coax cable.

The 360° degree camera systems also was last year's focal point in the automotive segment of Solectrix.

Therefore, for the first time, the company exhibits its new test environment. This makes it easy for the manufacturers of camera systems for passenger cars and commercial vehicles to accurately and seamlessly design the image transitions of their surround camera systems by optimizing the relevant algorithms. The system is already in use at the R&D development environments of several European car



manufacturers. On the occasion of the Embedded World 2016, it will be

presented for the first time in public and will be made available to other applications.



+++ About Solectrix +++

The Solectrix GmbH from Nuremberg is known for its FPGAs and the use of programmable logic in complex environments. The team of 75 members focuses on developing and providing turn-key high-performance image processing and test systems with extremely high data throughput rates in the context of particularly complex system architectures.

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## **LED heated measuring chamber for moving, liquid samples**

In the field of medical electronics the team of Solectrix GmbH offers a unique temperature control system for liquids with LED heater and radio-controlled temperature measurement directly on the sample. It's strength: intelligent temperature control without expensive Peltier element plus power-free measurement with data readout via radio. The temperature control of the fluid is done via individually controllable infrared LEDs, achieved a significantly more uniform temperature level in the disk than conventional heating systems.

The LEDs that are arranged radially in motion direction and will replace the live heating cartridge used so far for such purposes, greatly accelerating and controlling the heating and switch-off reactions of the chamber within seconds. The PCB with the measuring electronics is attached directly to the product - below the disk containing the serum - and without using any own power supply.

The first test application of the measuring chamber which is visually reminiscent of a tiny UFO, was the temperature control and analysis of blood serums. Previously, permanent measuring of moving systems was considered almost impossible. Solectrix Managing Director and project manager Jürgen Steinert: "With our LED heating system, which we have developed for this measuring chamber, we can now very elegantly and affordably solve this problem in any case, where, at the same time a moving fluid is to be tempered and data to be retrieved."

*Image: contactless LED measuring chamber  
for blood samples from Solectrix  
and Crux Product Design  
(<http://www.cruxproductdesign.com>)*

### **Media contact**

**Comm.Motions**  
Text & Public Relations

Dipl. Jour. Miriam Leunissen  
Hauswiesenstraße 1h, 86916 Kaufering,  
phone +49 8191 947 7676 / fax +49 8191 947 6828  
[mleunissen@comm-motions.com](mailto:mleunissen@comm-motions.com)

