

# » Application Story «

nanoETXexpress in Infotainment



## Automotive Electronics: Multi-functional Infotainment Platform from ICT Software Engineering

The multi-functional HMI becomes a selling point



In the automotive industry, Intel®'s Atom™ technology is paving the way for new, significantly improved and more efficient, multi-functional applications, often classified in the catchwords "infotainment" and "driver assistance". These TFT based systems are not only equipped to play and manage multimedia content they also take on the task of the central (occasionally driving situation-dependent) display of relevant data for internal and external networking (e. g. Bluetooth, UTMS etc) and interaction via the different vehicle data buses.

Central display and operating systems can currently be found in both mid- and (predominantly) in top of the range vehicles and are the most important differentiating factor in the competitive field. In future this will also apply to small cars. In order to cut costs for applications like these, the automotive industry is looking for the most-suited technology platforms.

For innovative and especially user-friendly, multi-functional applications with high scalability, x86 technology is recommendable: its open functionality enables the implementation of a wide range of tasks and it excels in graphic support and connectivity thanks to its impressive feature set which meets the performance level that enables significant, positive differentiation.

A company specializing in this type of OEM application for cars and commercial vehicles is ICT Software Engineering ([www.ict-se.de](http://www.ict-se.de)). For potential customers, the company developed an HMI navigation demonstrator on the basis of a COM Express™ compatible, credit-card sized nanoETXexpress-SP Computer-on-Module platform from Kontron, which runs on Windows XP, Ubuntu, Moblin-IVI Linux and Fedora and is thus ideally prepared for coming GENIVI standards. GENIVI is an industry alliance for propagating an in-vehicle infotainment (IVI) reference platform on the basis of Open Source software. Amongst other activities GENIVI wants to initiate a certification program and promote an Open Source development community with the aim of shortening development cycles and reducing costs for the development of IVI equipment and software. The first meeting of members took place in Detroit at the beginning of November.

The HMI navigation demonstrator makes it possible for the application engineer to directly start with the specific application development and simultaneously also use a potential target platform, which the embedded computer manufacturer Kontron then – in the serial production – delivers as a dedicated customer-specific design within its ODM (Original Design & Manufacturing) services. The aim of the ICT package is to enable developers of ODM HMIs to be able to concentrate on the specific look & feel. Based on the demonstrator which has just been

introduced, application developers can create an HMI navigation solution within the shortest space of time. The software architecture along with the hardware platform makes customization a highly efficient procedure. ICT relies on embedded x86er hardware in particular due to the long-term availability demands of the automotive industry. Offering long-term availability is a pre-condition for embedded computer vendors like Kontron. Furthermore, Kontron has its own manufacturing facility in Malaysia which adds to the potential cost efficiency, Kontron uses this for manufacturing its own standard products. Highest quality and cost efficiency can be realized accordingly for customer-specific designs which, for ODM services involving large quantities, is especially important. Customers need not however do without local service: Project management and engineering are all carried out in Germany ensuring that all processes are carried run fast and efficiently from milestone projects right through to serial production.



## AUTHORS



Josef Behammer  
(Kontron, left),

Martin Zappe  
(ICT).

## About Kontron

Kontron designs and manufactures embedded and communications standards-based, rugged COTS and custom solutions for OEMs, systems integrators, and application providers in a variety of markets.

Kontron engineering and manufacturing facilities, located throughout Europe, North America, and Asia-Pacific, work together with streamlined global sales and support services to help customers reduce their time-to-market and gain a competitive advantage. Kontron's diverse product portfolio includes: boards & mezzanines, Computer-on-Modules, HMIs & displays, systems & platforms, and rugged & custom capabilities.

Kontron is a Premier member of the Intel® Embedded Alliance and has been a VDC Platinum Vendor for Embedded Computer Boards 5 years running. Kontron is listed on the German TecDAX stock exchange under the symbol "KBC".

For more information, please visit: <http://www.kontron.com>

### CORPORATE OFFICES

#### Europe, Middle East & Africa

Oskar-von-Miller-Str. 1  
85386 Eching/Munich  
Germany

Tel.: +49 (0)8165/ 77 777  
Fax: +49 (0)8165/ 77 279  
info@kontron.com

#### North America

14118 Stowe Drive  
Poway, CA 92064-7147  
USA

Tel.: +1 888 294 4558  
Fax: +1 858 677 0898  
info@us.kontron.com

#### Asia Pacific

17 Building,Block #1,ABP.  
188 Southern West 4th Ring Road  
Beijing 100070, P.R.China

Tel.: + 86 10 63751188  
Fax: + 86 10 83682438  
info@kontron.cn

