Antti-Brain

Issue 7 (special issue)

Embedded World 2009

Revised on March 6, 2009

Editorial

Special issue “back from Embedded World”. Just photos and very short commentary.

On the cover photo: me and the brains. No, in the hands I have a FPGA Stamp ☺

In the next(regular issue) ISSUE:

A new STM32 Development Platform

XMOS XC-1

And hopefully plenty of other stories (also some more stories related to the embedded world 2009).

Information about FPGA Stamps, MicroFPGA and UD Cards will be available soon at TrioFlex website (or then at product specific websites).

This special issue is not at all any complete coverage of the Embedded World, just some stories of what did hit the eye. Ah, probably first time in the history there was also one Estonian company present: Artec Group.

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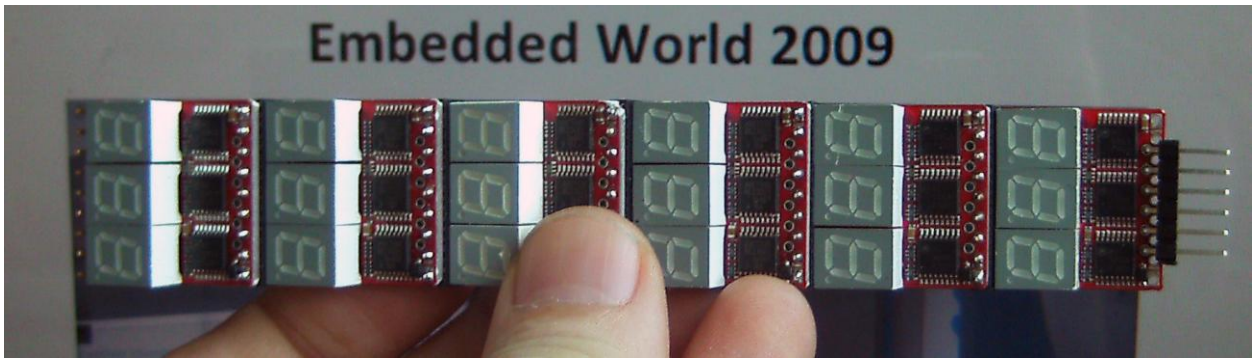
Embedded World 2009

It did come really too quick! Many things I wanted to have ready did not come in time.

“Oho” LED modules:



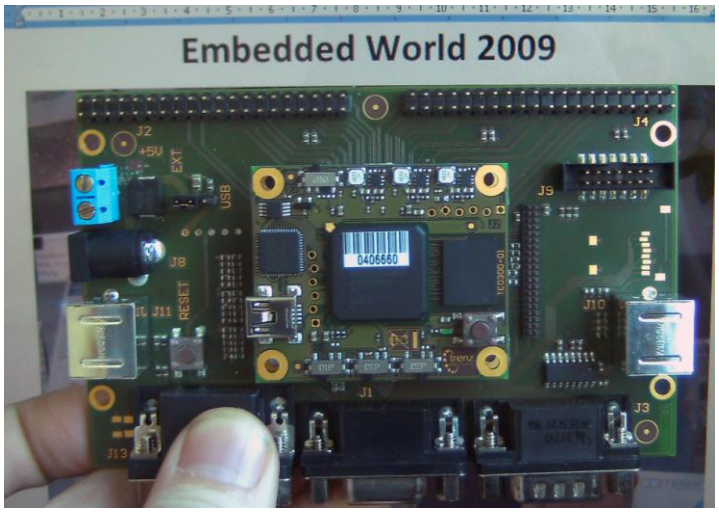
Those are the new production versions of the LED modules from Oho. They did make oho OHO animation, that was pretty much attractive. The modules are stackable and can be used with either oho modules or with any host boards that have Digilent pmod header.

Genode FX

Genode FX - an OS Framework and GUI for FPGA's.

Genode-FX, presented by Norman Feske, founder of Genode Labs.

The board on the photo is TE300 industrial micro-module plugged into a mainboard. A Xilinx Spartan-3E1200 with MicroBlaze based SoC design. Demo application size about 250 Kbytes (without graphics).



3D Camera with FPGA

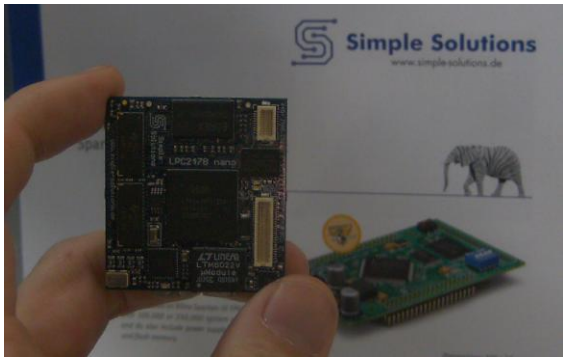
3D vision and FPGA's both fun ☺

The FPGA micro-module is in the lower area of the black box. 3D face scan is been done on Aleš Gorkič from Optomotive.

This is the FPGA micro-module from Trenz Electronic used both in the 3D camera as in the Genode Demonstration:

Simple Solutions

Stephan Schirrmann from Simple Solutions with LPC21xx based DIP module.

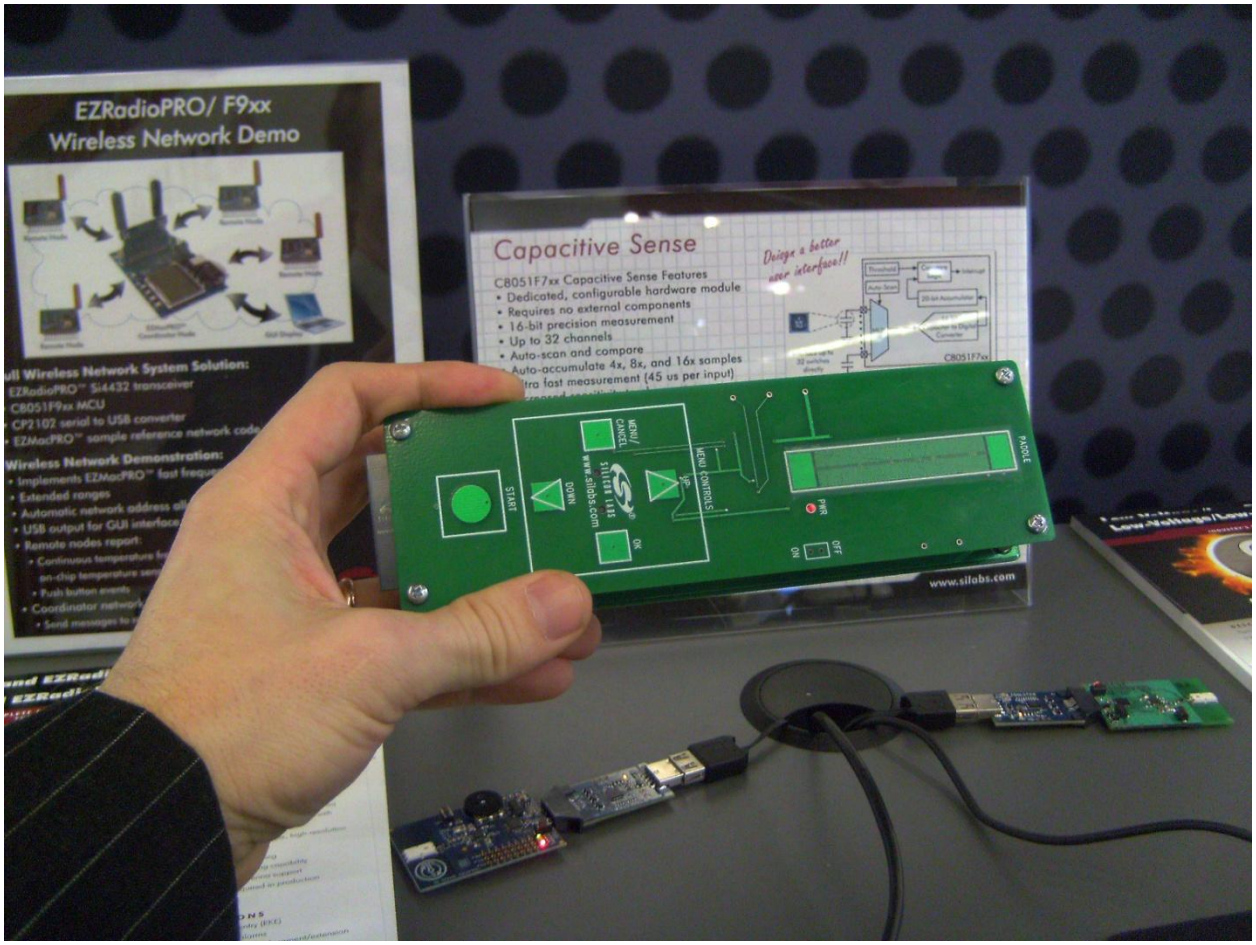


LPC2178 based nano-board (compatible to FPGA based nano-boards).

Touch Technologies

There are some new things.

SiLabs Touch solutions



SiLabs new CapSense demo. To the right on the board is a slider. It is a ratiometric type slider, but it does not use the pattern patented by Analog Devices. The solid pads at both sides of the slider are for better detection of the “finger outside slider area”. The slider uses 2 channels and 2 pins (2 more for the end sensors). In the background is feature list for the new C8051F7xx family.

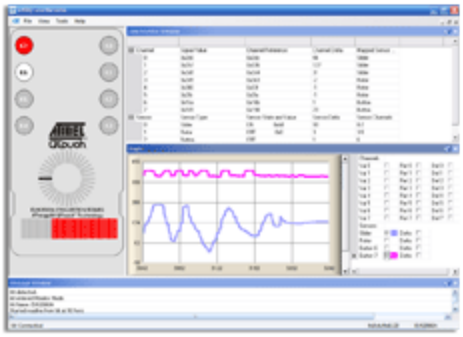
Atmel Touch sense library

What was new for me, well I was wondering for some time, how come Atmel has no soft capacitive sense libraries? But in the matter of fact they have them published already end of 2008, I just didn't notice them. I only had found one 3rd party project where Atmel AVR was used for capacitive touch sensing. But now the libraries are offered by Atmel, and they are committed to add library support to cover all AVR's.

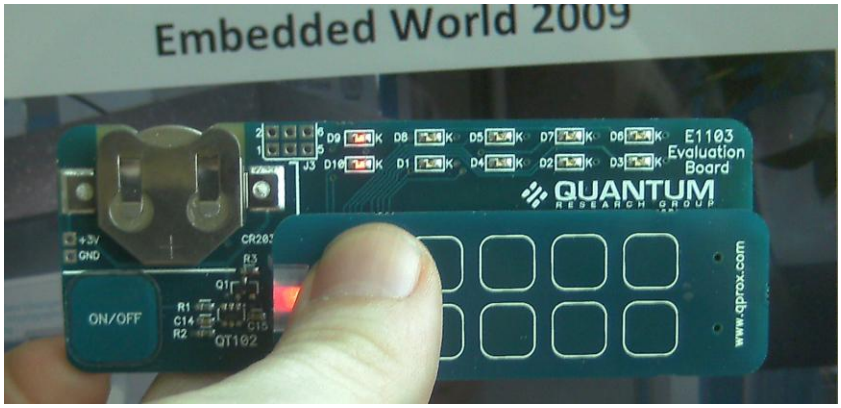
At Atmel booth they had touch demo EVK2080A/B kit that used ATmega88/ATtiny88 for sensing and as controller.

http://www.atmel.com/products/touch/touchswlib.asp

I have really missed that at Atmel, there is also AVR QTouch Studio:



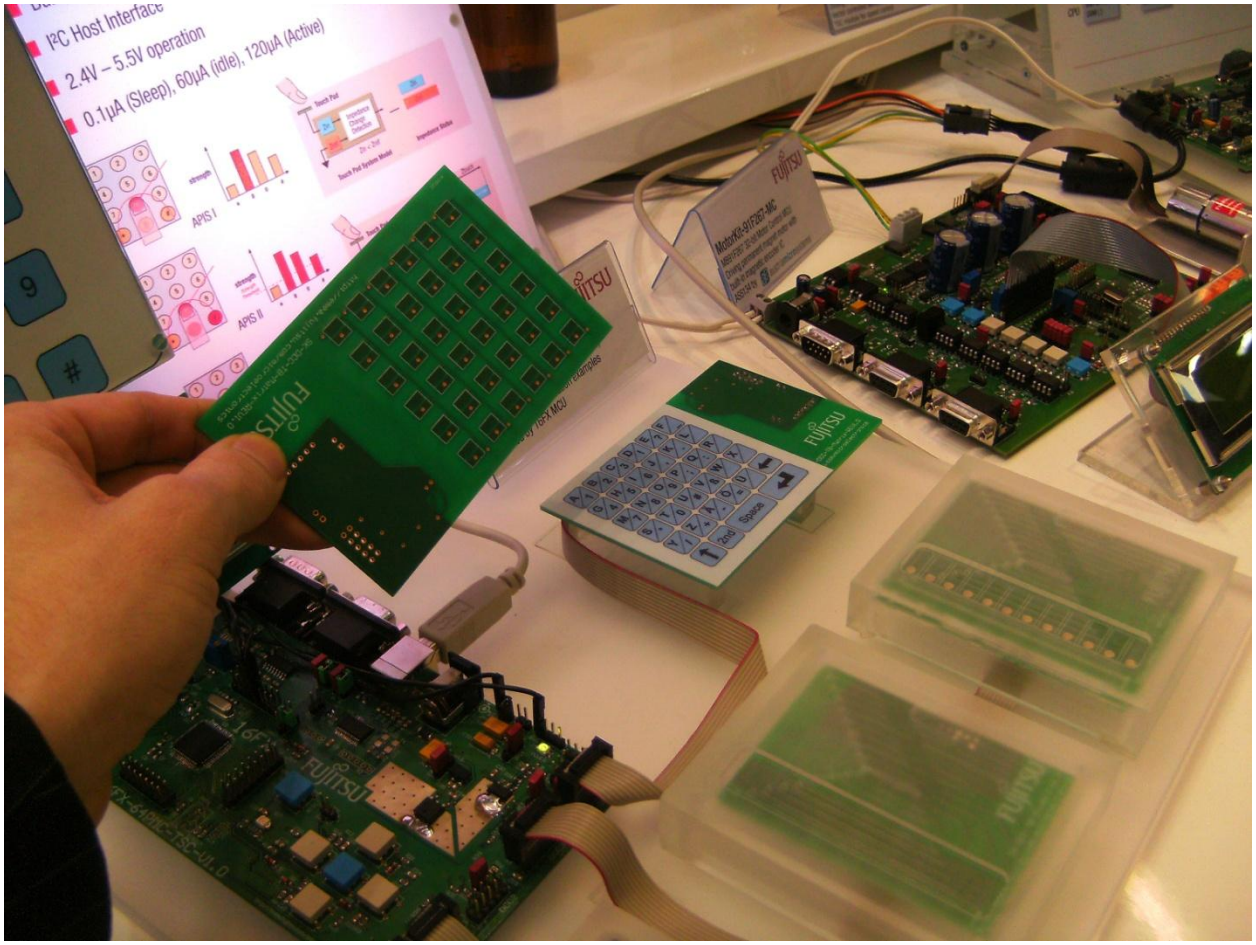
Oh, no, Atmel QTouch library is supplied as compiled binary lib for IAR compiler only. Not really useful. Most other microcontroller vendors have C code for the sensor functions available. Hum the QTouch Studio is really only for the owners of the EVK2080x, it has no functionality otherwise at all.

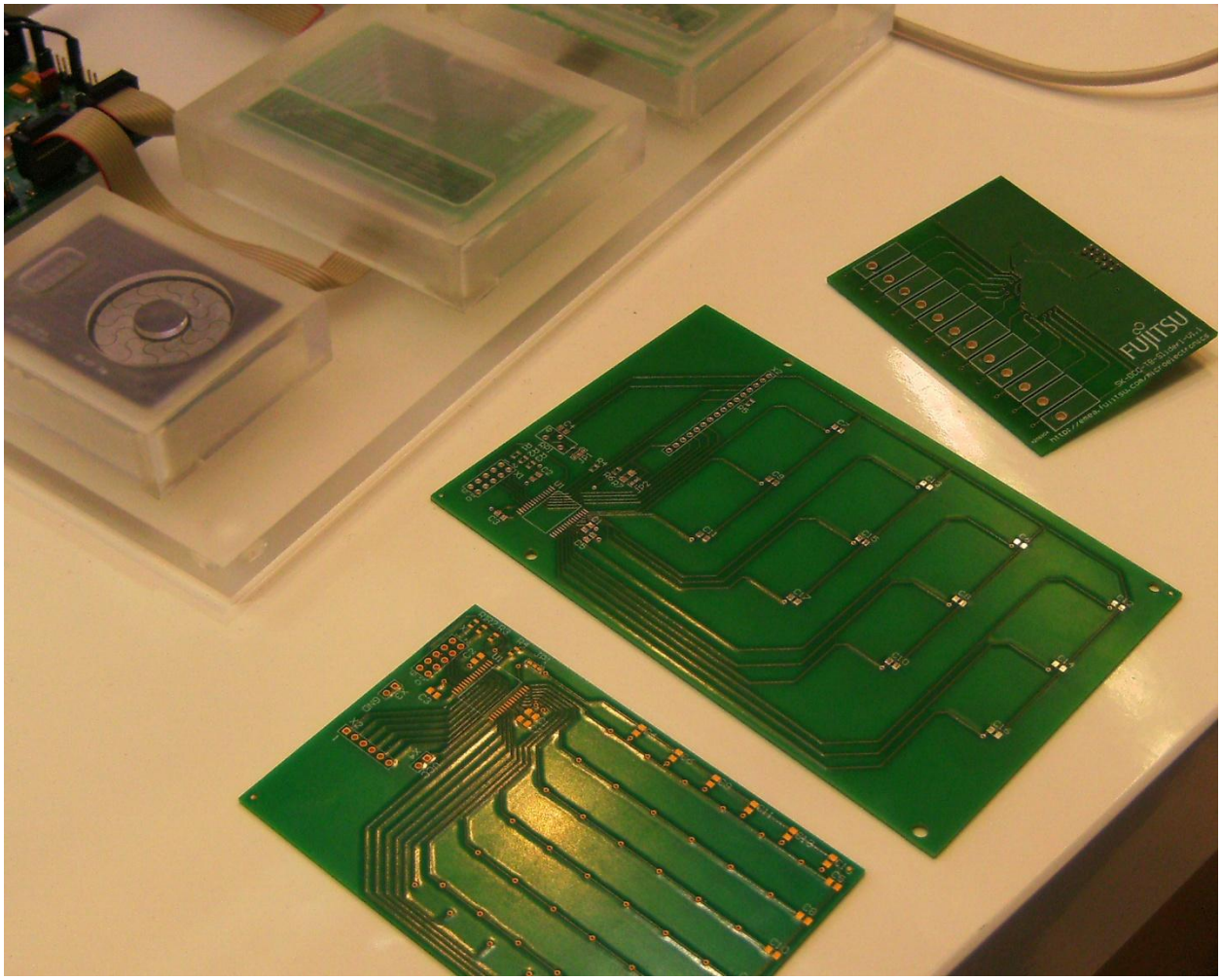


No matter the AKS (Adjacent Key Suppression) the two left buttons worked differently from the rest.

Fujitsu Touch

Seems that everybody is doing touch sensors.





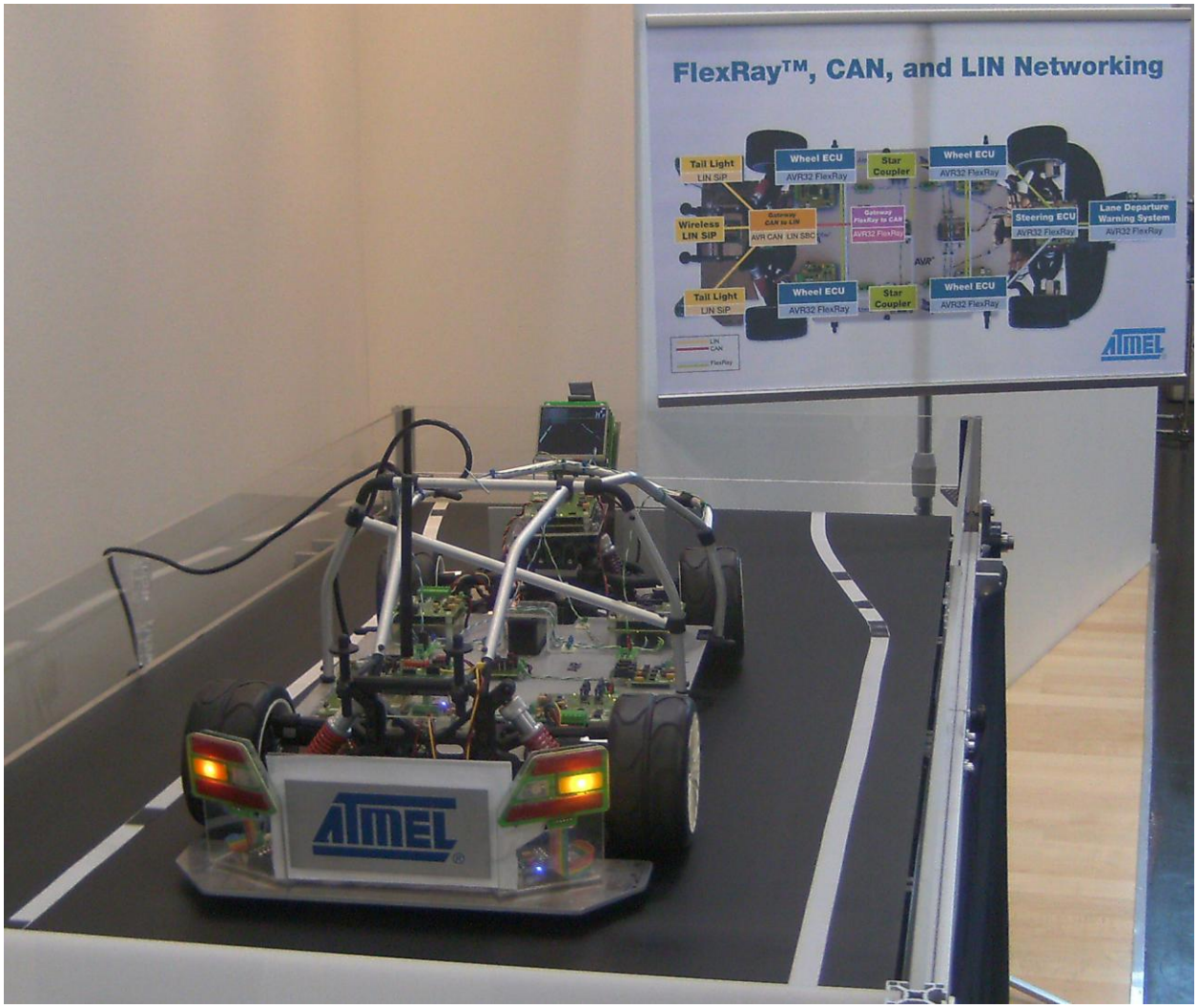
The sensor IC is on SOIC package so easy to use, most other standalone touch IC's are QFN packaged.

Eclipse

On my world-around trip when I hoped to see full sun-eclipse on Hawaii, I did sleep through! At embedded I had to sit into an replica of a UK Cab to see Eclipse IDE on 26 inch monitor.

The reason why I bothered was just curiosity – I have been asked to comment on Eclipse in regard of its use as IDE for XMOS software defined silicon devices. So I asked some comments from the guys who have heavily invested into Eclipse support. I got a quick tour how a new language parser was described and then parser and syntax highlighting editor auto-created from the description.

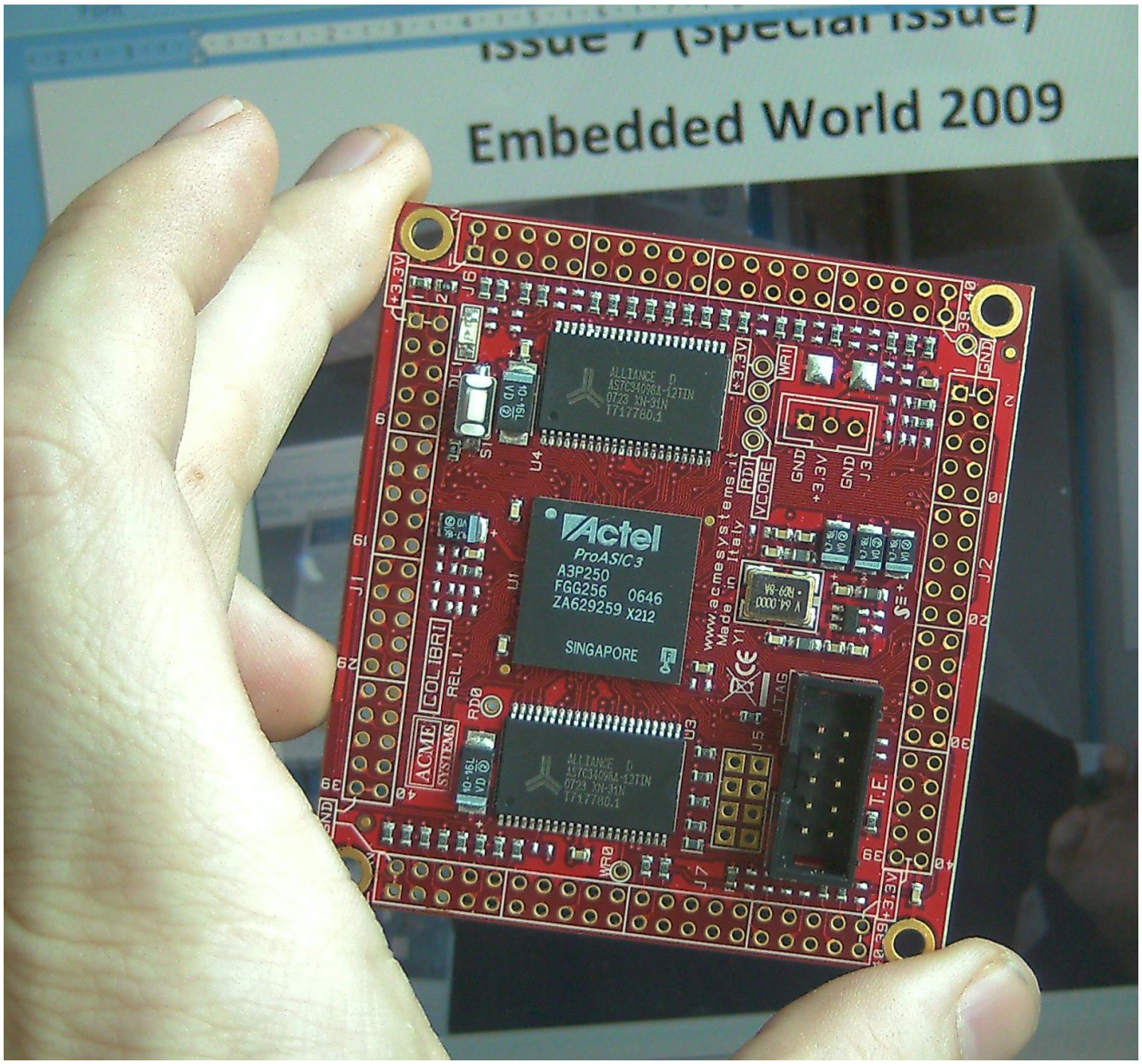
X-by Wire



The car was driving on the moving belt.

Actel

Smiling faces nice chat. Sandwiches and cakes. And no, I did not eat them all, as it was just before the After party on the first day when I found my way to Actel's booth.

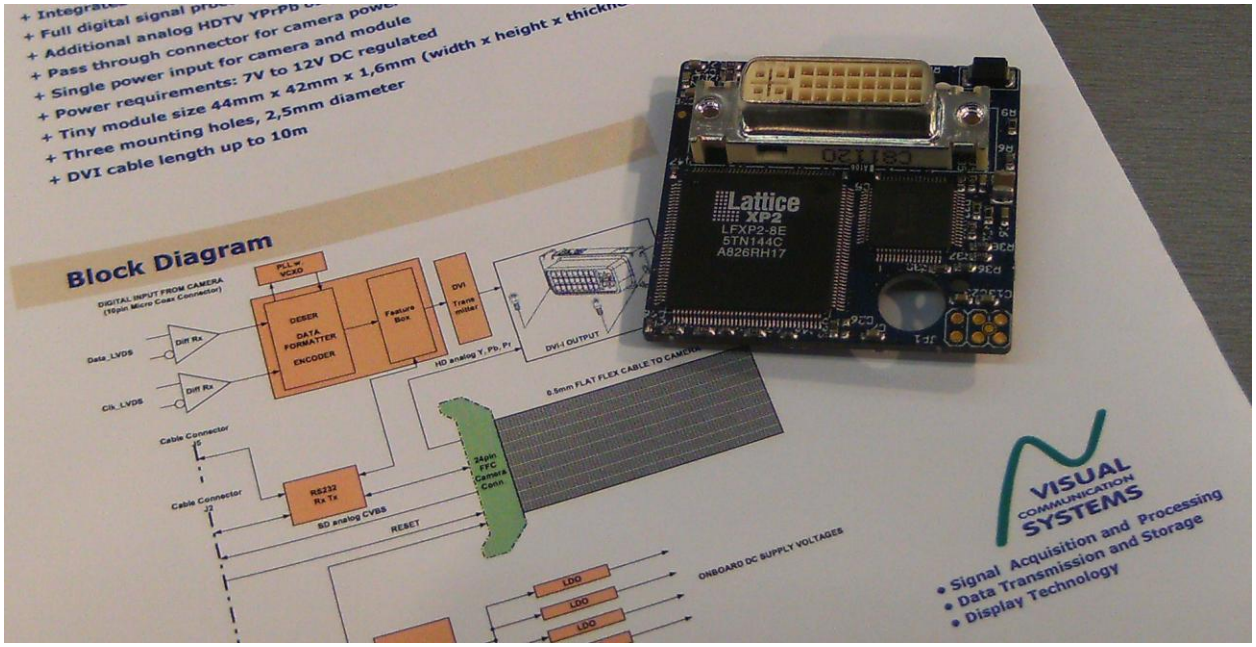


Another nice talk with the developer of this board – Colibri from ACME systems.

http://colibri.acmesystems.it/

Lattice

Said that both samples and board for ECP3 are available now. Pricing as usual 1KLUT=1$.

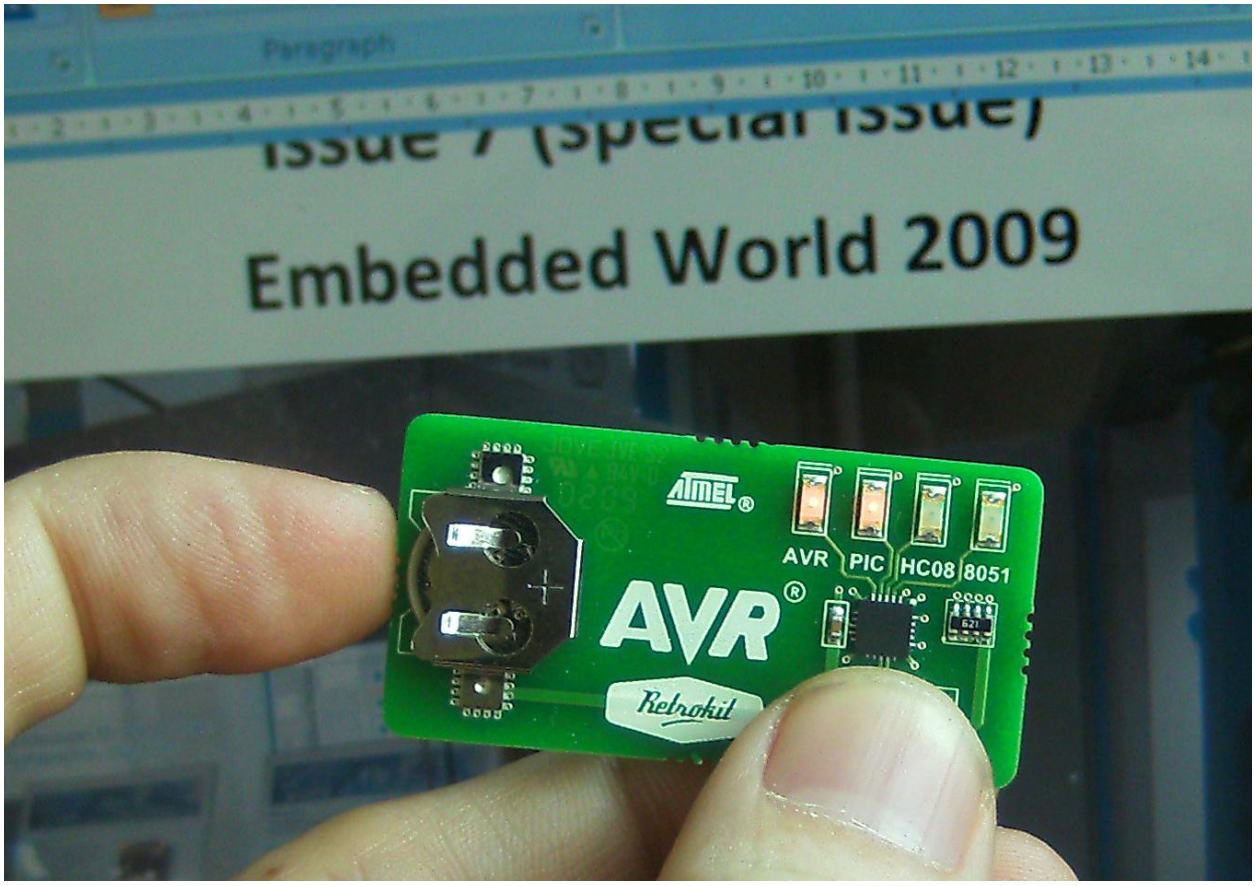


One of the products using Lattice XP2 that I did scope at the show. Another company who had XP2 based products was Innovasic.

Altera

Claimed that Arria II GX both samples and kits will be available in 3 months.

Retro it!



I wonder if this is Trademark use violation or not? PIC© is registered Trademark of Microchip? The board has ISP header pads at the other side so it can be reprogrammed if someone needs a low cost demo board.

Another place to get retro-feeling was booth of Innovasic

Intel 186 CPU in VQ100, 1000 pcs price 8$.

Xilinx/6

Xilinx/6 Soft-stone - hold by Silica Dog “Täpik“, hold by my son Andre (6 years old).

References

- Genode Labs http://www.genode-labs.com
- Optomotive http://www.optomotive.si
- Trenz Electronic http://www.trenz-electronic.de
- Artec Group http://www.artecgroup.com
- …