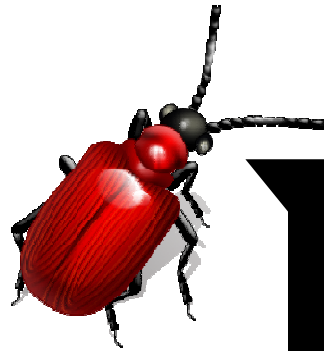
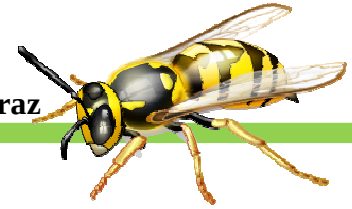
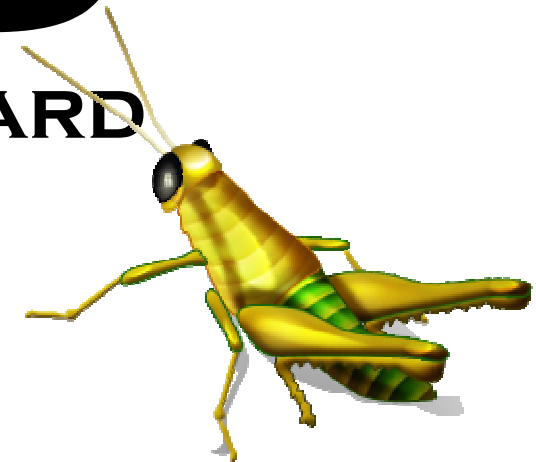




# NLB

## NEXT LEVEL BOARD



SB8v2006

Licht-Frequenzumsetzer

DOT-Matrix LCD 20 Zeichen/2 Zeilen

1-wire (Temp.)

Temperatur-sensor NTC

Netzteile 5V

80C517A

COM0

COM1

LCD-Kontrast

12 MHz

RTN

ACCU 3,6V

64KB NV-RAM

I2C Temp.

SPI

LED Graphik

Drehimpuls-geber

humerboard.at

CAMPUS02

RESET

user / Beispielprogramme

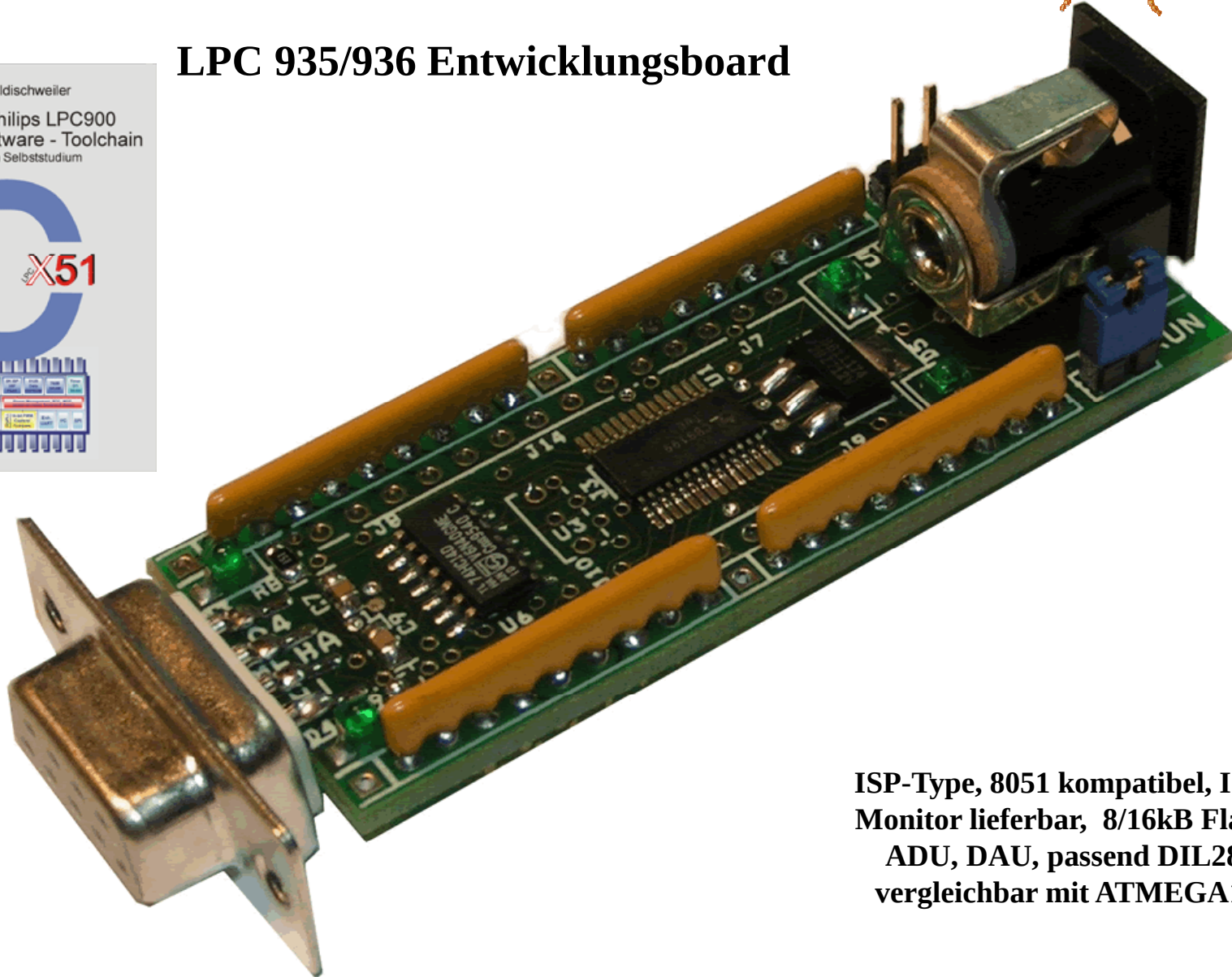
Monitor / user application

Tastaturentprellung und -codierung

www.humerboard.at, September 2005

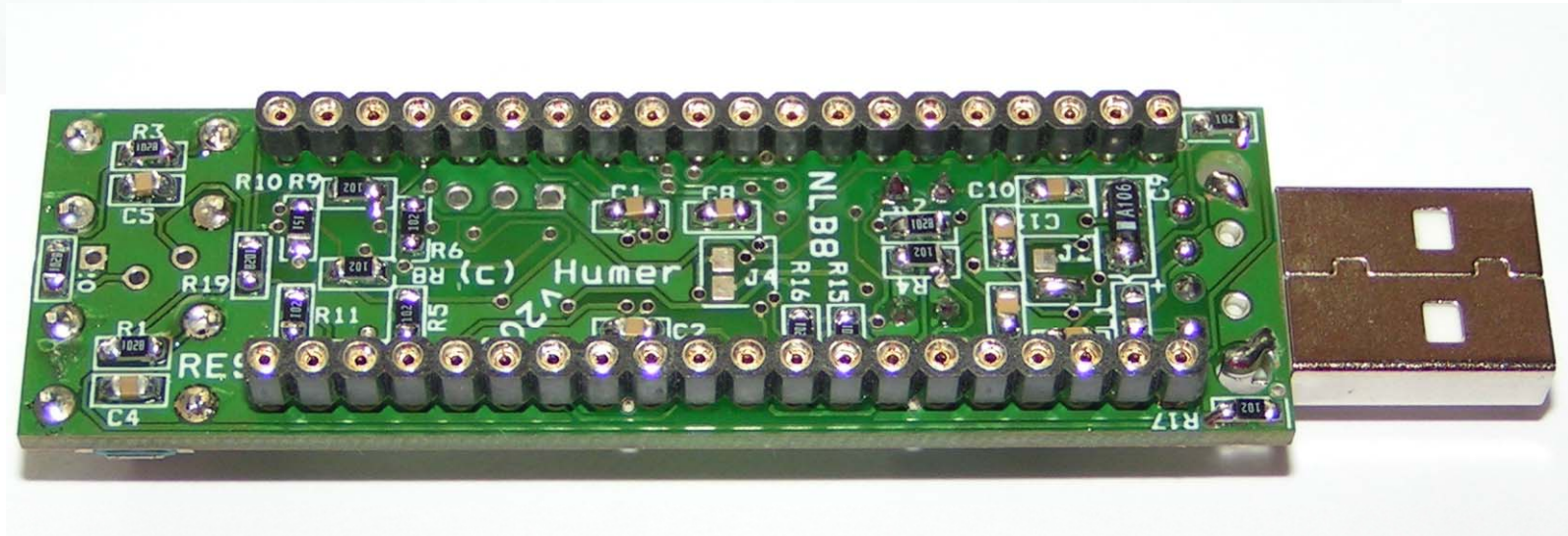
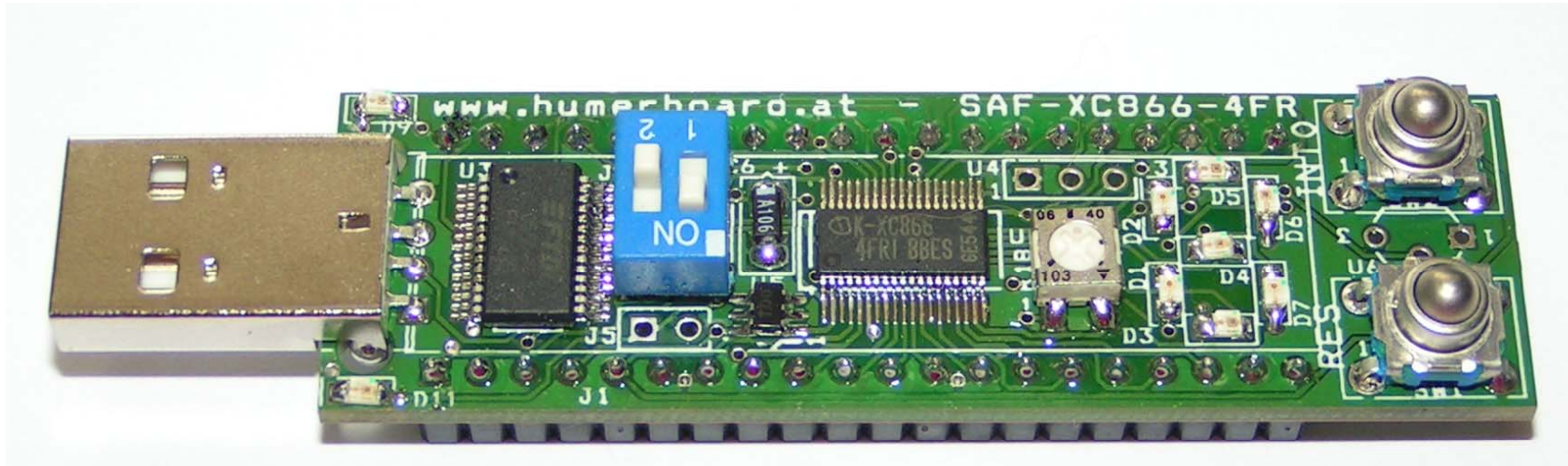
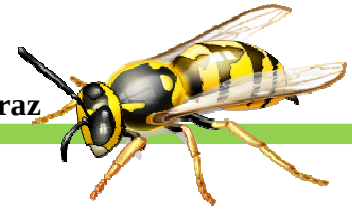


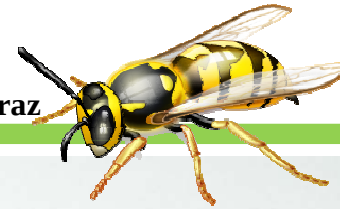
## LPC 935/936 Entwicklungsboard



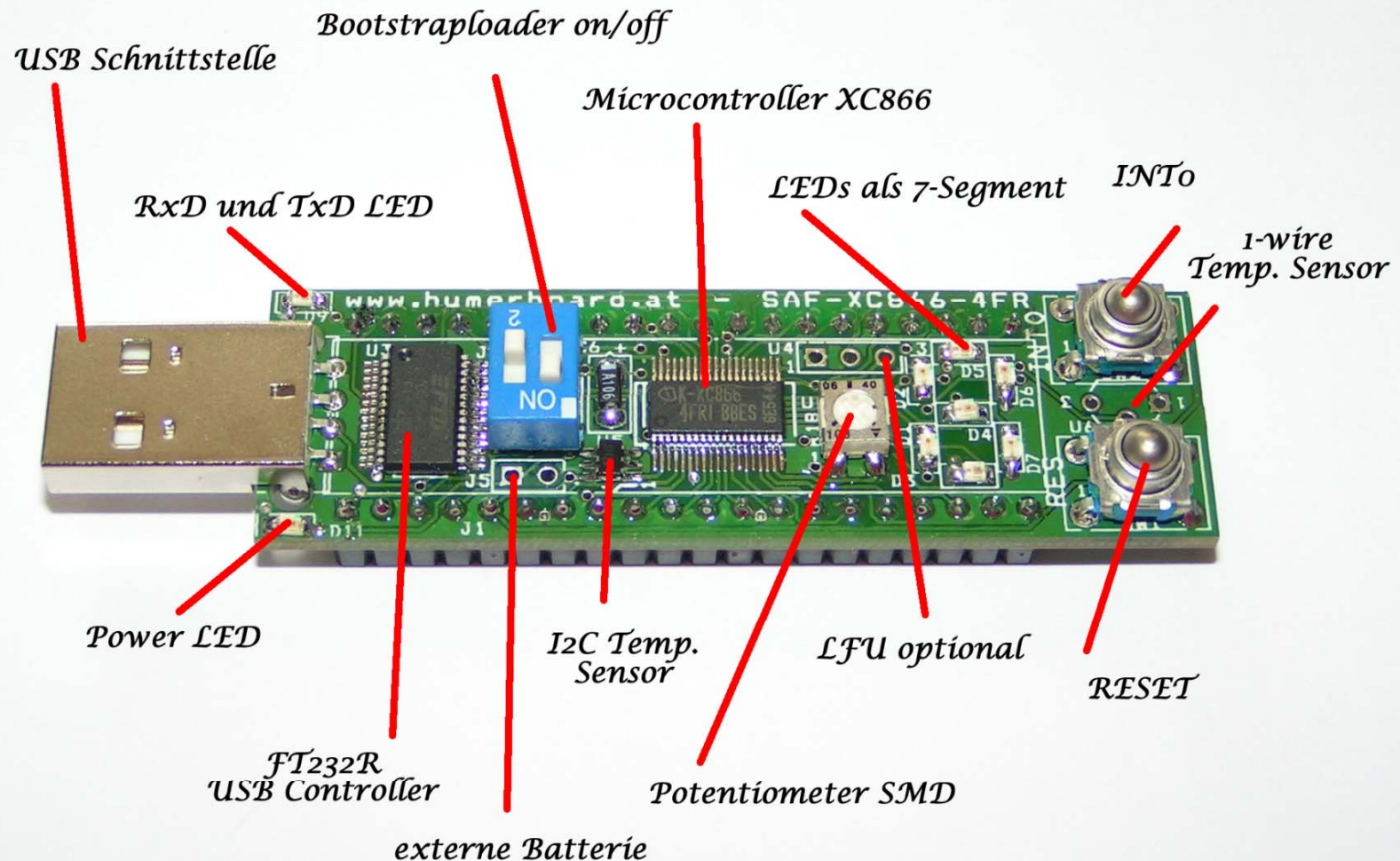
ISP-Type, 8051 kompatibel, ISD-Monitor lieferbar, 8/16kB Flash, ADU, DAU, passend DIL28, vergleichbar mit ATMEGA16

# Bericht FTKL Tagung 2009 - Next Level Board – Humer / BULME Graz



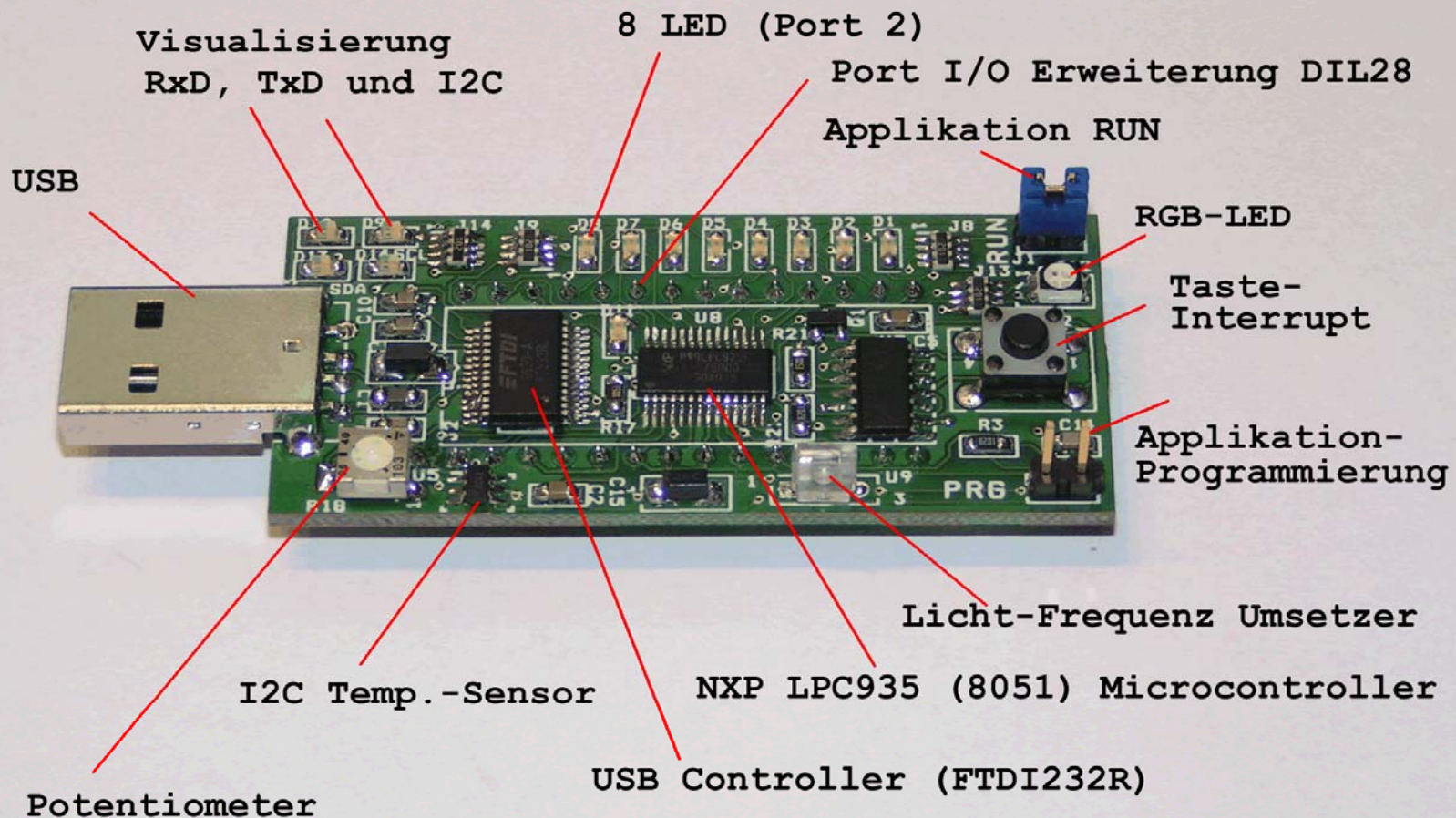


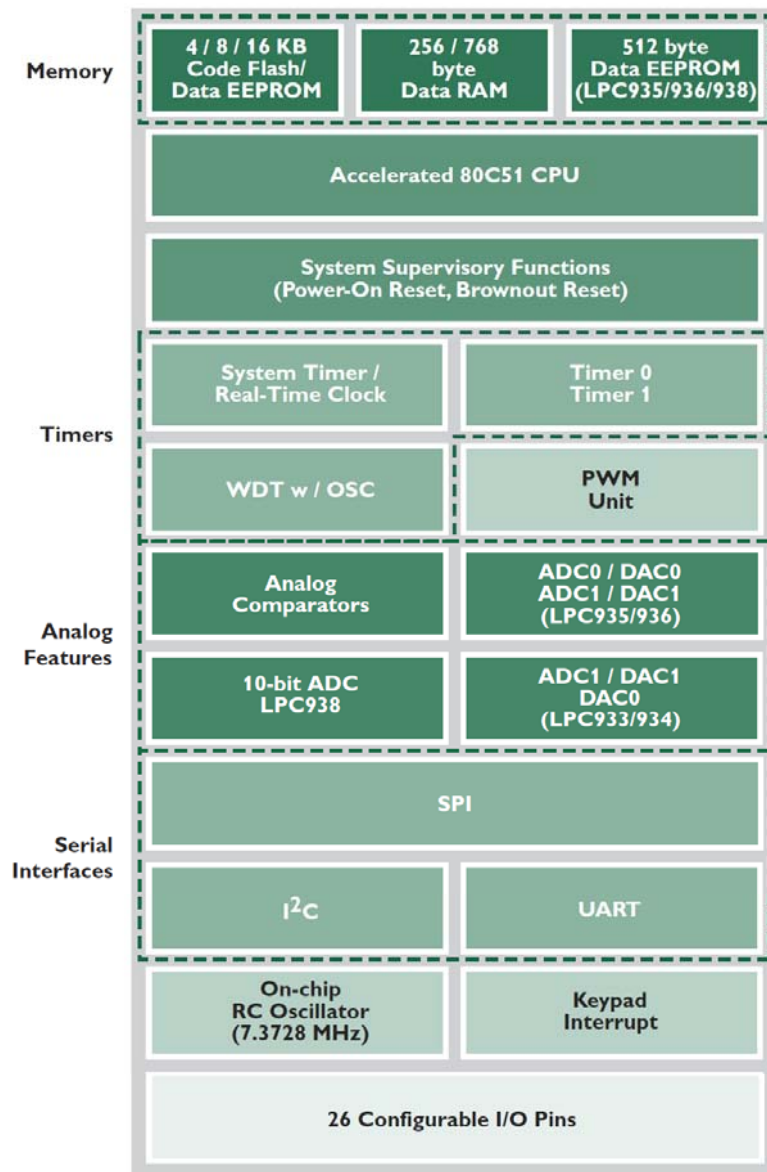
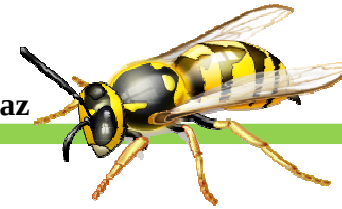
## NLB8 System XC866





# Next Level Board - LPC935 - Flash 8051

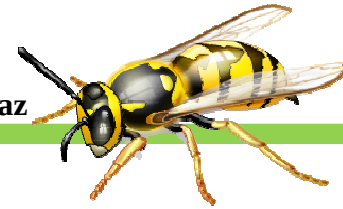




P89LPC93x block diagram

### Key features

- Two independent 4-channel 8-bit ADCs/DACs (LPC935/936). Both ADCs can be converted in parallel with same-time sampling
- One 4-channel 8-bit ADC and two 1-channel 8-bit DACs (LPC933/934) or one 8-channel 10-bit ADC (LPC938)
- 4/8/16 KB byte-erasable Flash code memory with 1 KB /2 KB sectors and 64-byte pages. Sectors or pages can be erased in 2 ms
- 256/768-byte RAM data memory
- Two 16-bit timers. Each timer pin may be configured to become a PWM output or a counter input
- Real-time clock that can also be used as a system timer
- Two analog comparators with selectable inputs and reference source
- 2.4 V to 3.6 V  $V_{DD}$  operating range. I/O pins are 5 V tolerant (may be pulled up or driven to 5.5 V)
- SPI communication port
- 400 kHz byte-wide I<sup>2</sup>C communication port plus enhanced UART
- 16-bit capture/compare unit (CCU) (LPC935 / 936 / 938)



## **Anwendungen FTKL/TINF**

**Lauflicht**

**Binärzähler**

**BCD-Zähler**

**Zeitbasen mit Timer**

**Counter mit Timer**

**Serielle Schnittstelle**

**Taschenrechner**

**Elektronischer Würfel**

**Reaktionszeitmessgerät**

**I2C Temperaturmessung**

**1-wire Temperaturmessung**

**PWM Programme (LED)**

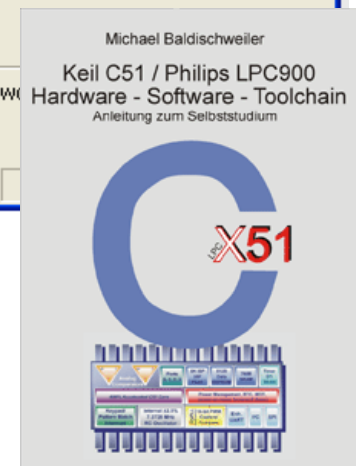
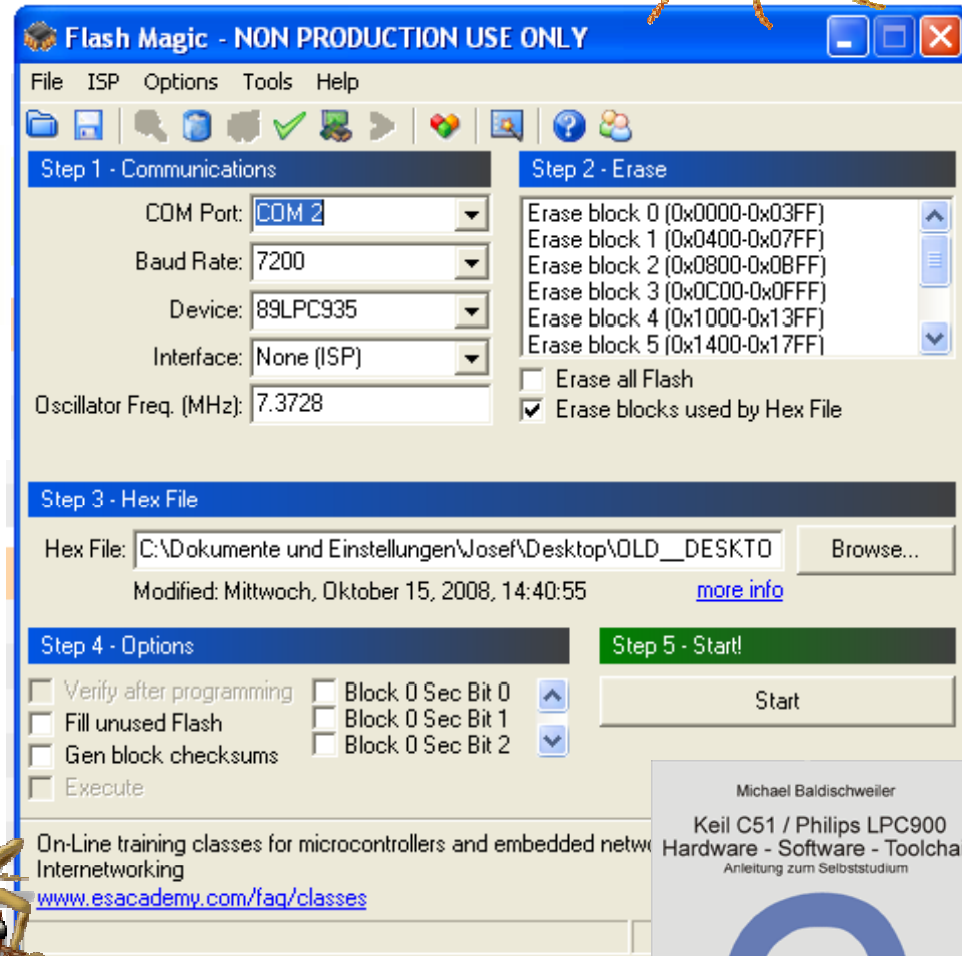
**Spannungsmessung (Analog)**

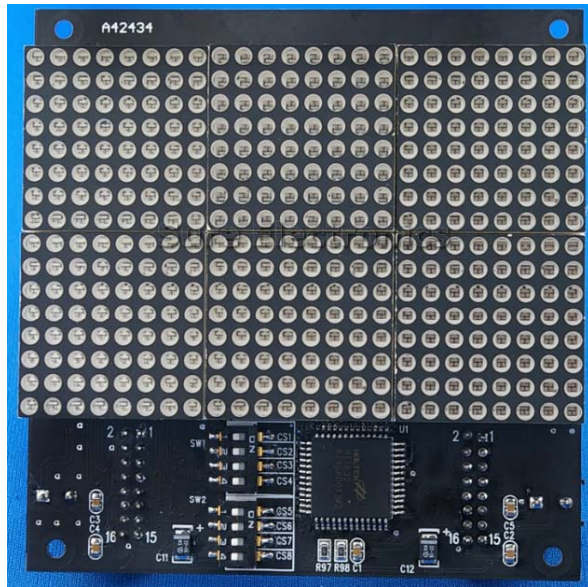
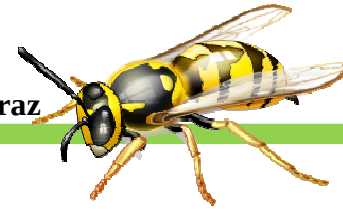
**Kombinationen**

**usw... .... Erweiterungen**



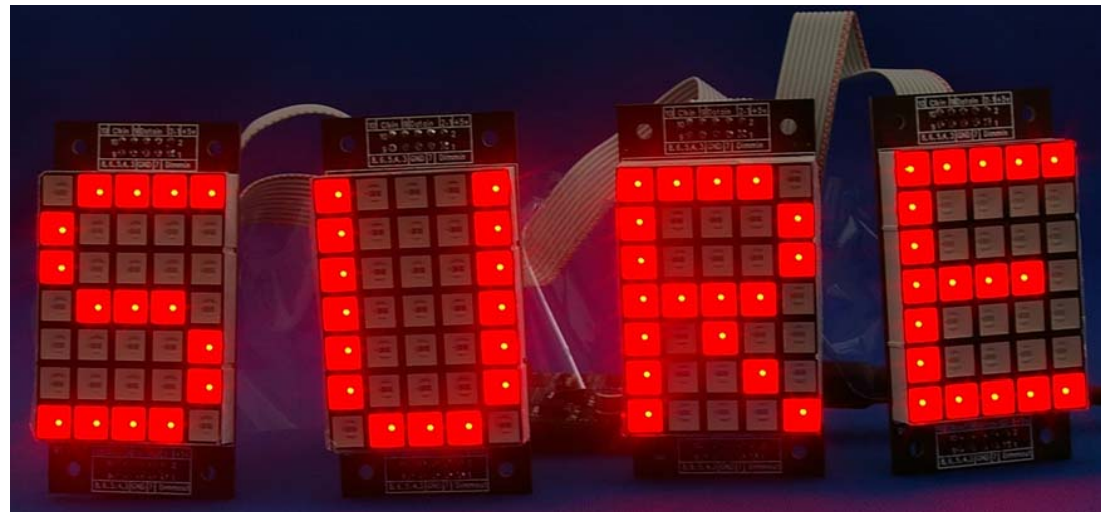
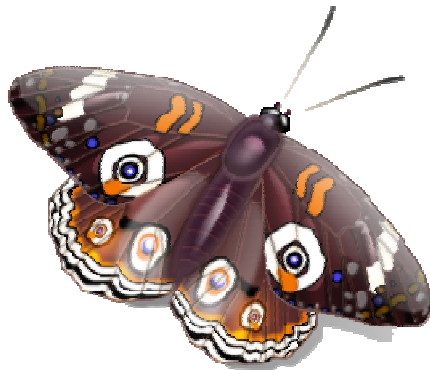
# Bericht FTKL Tagung 2009 - Next Level Board – Humer / BULME Graz





Displaymodul 24x16 Punkte 7€

DOT-Displaymodul 5x7 Punkte 4€

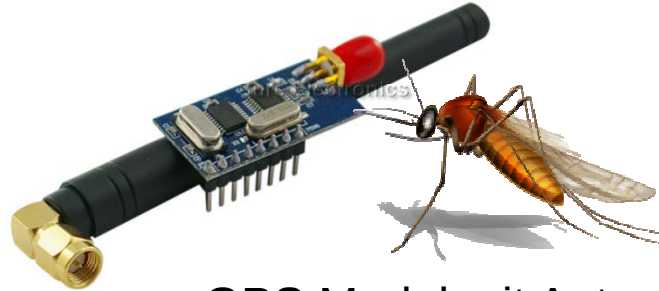




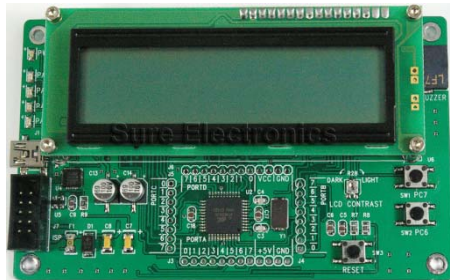
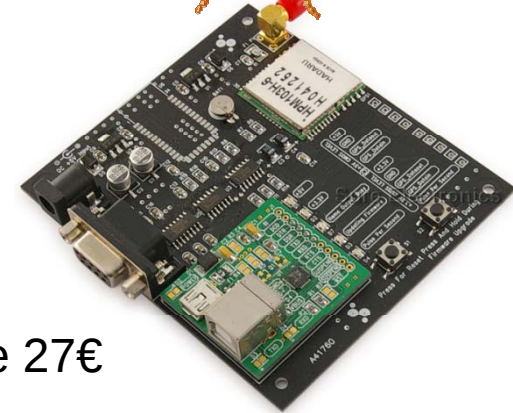
Gyrator 14€



Transceiver 433MHz 9€



GPS Modul mit Antenne 27€



AVR/PIC Board 24€



3-Achsen Beschlg. 11€

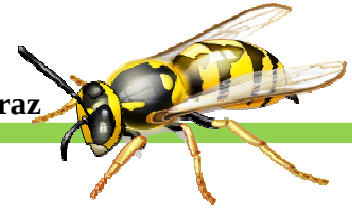


2-Achsiger Kompass 35€



Ultraschall Entfernungsmesser 9€





**Nächster Termin: N L B LPC935/936**

**Mo. 9. November 2009**

**BULME GRAZ**

