

# CD 8051 Inhalt

Die CD kann zum Preis von ATS 137,60 bei [pcnews@pcnews.at](mailto:pcnews@pcnews.at) oder auch über die Antwortseite <http://pcnews.at/thi/bez/~cd.htm> bestellt werden.

Franz Fiala

Die CD 8051 enthält eine Sammlung von Materialien, die sich im Laufe eines Jahrzehnts auf Disketten, auf ftp-Servern und im PCNEWS-Archiv angesammelt haben.

## Auch im Web

Alle hier aufgelisteten Dokumente und Programme können zwar über den PCNEWS-Server geladen werden (<ftp://pcnews.at/uc/51/<xx>>, wobei für xx Pfad und Dateiname der folgenden Aufstellung einzugeben ist.), doch wenn Sie Interesse für mehrere Dokumente haben, bestellen Sie bitte die CD, da der Download sonst für uns sehr teuer werden kann (Richtpreis 1MB=ATS 4,-).

Die CD kann mit einem Browser gelesen werden, das erste Dokument ist </main.htm>. Für PDF-Dokumente ist ein Acrobat-Reader erforderlich (auf der CD enthalten).

## Inhalt

- $\mu$ Profi-537
- 8051 Skriptum
- 8051-Powerpoint und FAQ
- Infineon-Information
- C511C513 Starterkit
- Datenblätter
- EXBO Experimentierplatine
- PCNEWS-Artikel
- PCNEWS-Web
- Programme
- Projekte

## $\mu$ Profi-537

Der  $\mu$ Profi-537 ist eine Mikrocontrollerplatine, die ursprünglich in der SIE-MENS-Lehrwerkstätte von Hermann Schönbauer entwickelt wurde. (In den nachfolgenden Dokumenten befindet sich auch sein Originalartikel aus den PCNEWS). Dieser ursprüngliche Entwurf wurde von der Elektronik-Werkstätte als Lehrobjekt für ein weitergehendes Layout verwendet, das auch im Unterricht eingesetzt wird. Diese Platine wird am TGM für verschiedenste Projekte und für den 8051-Unterricht eingesetzt.

<uprofi537/80c537.htm>

### $\mu$ Profi-537-Seite 1

Robert Syrovatka  
<eagle/9809/seite1.pdf>

### $\mu$ Profi-537-Seite 2

Robert Syrovatka  
<eagle/9809/seite2.pdf>

## 80C537-Mikrocontroller Board

Peter Pramberger  
[../pcnews/n52042.pdf](..../pcnews/n52042.pdf)

## Mikrocontrollerboard für 80C537 oder 80C517A

Hermann Schönbauer  
[../pcnews/n49086.pdf](..../pcnews/n49086.pdf)

## 8051 Skriptum

Das 8051-Skriptum ist eine sehr gute Arbeitunterlage für Schüler, um die Arbeitstechnik mit dem 8051 zu erlernen.

Walter Riemer  
<skriptum/8051.pdf>

## 8051-Powerpoint und FAQ

Ein Foliensatz, der die Inbetriebnahme der Boards  $\mu$ Profi-51,  $\mu$ Profi-537, Starterkit an Hand eines Beispielprogramms sowohl am Simulator (dScope) als auch am Target-Debugger (tScope) in Zusammenarbeit mit dem EXBO-Board zeigt.

<ppt/8051.ppt>  
<ppt/8051FAQ.ppt>

## Mikrocontroller INFINEON

Diese umfangreiche Sammlung von enthält:

- Product Information
  - User Manuals
  - Data Sheets
  - Application Notes
  - Articles
  - Utilities
- <8bit/8micro.pdf>

## C511C513 StarterKit

Komplette Unterlagen einer StarterKit-CD  
[C511C513/511\\_13ki.pdf](C511C513/511_13ki.pdf)

## Datenblätter

Alle Datenblätter wurden aus Webquellen kopiert.  
[datenb/\\_pdf.htm](datenb/_pdf.htm)

## ATMEL

**8-Bit Mikrocontroller with 2k Flash AT89C2051**  
<doc0368.pdf>

**8-Bit Mikrocontroller with 8k Flash AT89C8252**  
<doc0850.pdf>

**AT89 Series Hardware Description**  
<doc0499.pdf>

**Flash Microcontroller Application Note**  
A Digital Thermometer the AT89C2051 Microcontroller  
<doc0597.pdf>

**Flash Microcontroller Application Note**  
Using the AT89C2051 Microcontroller as a Virtual Machine  
<doc0592.pdf>

**Flash Microcontroller Architectural Overview**  
<doc0497.pdf>

**Flash Microcontroller Memory Organization**  
<doc0498.pdf>

## HUEY

**Huey51 Prototyping board**  
<Huey51.pdf>

## INFINEON

**SAB 80C5XX Microcontroller Family**  
**515,535,517,537,515A,517A (8.98)**  
<Pg5xx.pdf>

## INTEL

**8X251SA//SQ HIGH-PERFORMANCE CHMOS MICROCONTROLLER**  
[8XC251data\\_intel.pdf](8XC251data_intel.pdf)

**Using the Intel MCS-51 Boolean Processing Capabilities**  
[8051bool\\_intel.pdf](8051bool_intel.pdf)

## KEIL

**8051 Demo Kit**  
Getting started with the 8051Microcontroller Development Tools  
<dm51.pdf>

## PHILIPS

**80C51 External Memory Interfacing**  
[8051\\_mem\\_philips.pdf](8051_mem_philips.pdf)

**80C51 family hardware description**  
[8051\\_hw\\_philips.pdf](8051_hw_philips.pdf)

**AN434Connecting a PC keyboard to the I2C Bus**  
<Iicpckbd.pdf>

**BC107**  
<bc107.pdf>

**How to Implement I2C-Serial Communication Using Intel MCS-51 Microcontrollers**  
[8051\\_iic\\_philips.pdf](8051_iic_philips.pdf)

**PLM51 I2C software interface IIC51**  
[Iic\\_plm.pdf](Iic_plm.pdf)

**RAM loader program for 80C51 family applications**  
[51ramlod\\_philips.pdf](51ramlod_philips.pdf)

**Selection Guide for the 80C51 Microcontroller Family**  
[mcu\\_comp.pdf](mcu_comp.pdf)

**Using up to 5 external interrupts on 80C51 family microcontrollers**

51extint\_philips.pdf

**TEMIC****C51 architectural overview**

c51\_architectural\_overview\_temic.pdf

**C51 hardware description**

c51\_hardware\_description\_temic.pdf

**C51 programmers guide instruction set**

c51\_programmers\_guide\_instruction-set\_temic.pdf

**CMOS 0 to 42 MHz Single-Chip 8 Bit Microcontroller**

80c31\_temic.pdf

**A3-Flachbettplotter**

n24028.pdf

**ENTWICKLUNGSSYSTEM FÜR 80C552**

n24016.pdf

**MAP2SYM - SYMBOL FORMAT**

n24027.pdf

**EXBO****EXBO Teil 1**

Walter Waldner

n61104.pdf

**EXBO Teil 2**

Walter Waldner

n62106.pdf

**FIRMEN****Embedded MS-DOS & Windows**

Franz Fiala

n49091.pdf

**Neues von KEIL**

Hermann Sailer

n49091.pdf

**GRUNDLAGEN****µC 8051 im Unterricht**

n38046.pdf

**Bitadressierung im 8051-Mikrocontroller**

Walter Riemer

n62101.pdf

**Mikrocontroller**

n38043.pdf

**Portable C-Programme**

n38060.pdf

**Remote Debugging am 80x51**

n38053.pdf

**Rund um das INTEL-HEX-Format**

n38052.pdf

**Von Neumann Adressierung**

n38067.pdf

**LITERATUR****µC in den PC-NEWS**

n38045.pdf

**Literatur INTERNET/ISDN/controller**

n38063.pdf

**Mailboxen für µC**

n38065.pdf

**SOFTWARE****electronic only**

Peter Ullrich

n49060.pdf

**RUESS Entwicklungssoftware für Mikrocontroller**

Peter Ullrich

n61104.pdf

**SYSTEME****8031-Experimiertersystem im Unterricht**

n24040.pdf

**80C32-Minimodul von nds**

n24041.pdf

**SBC3-V3: Sigle Board Controller 80C552**

n38047.pdf

**PCNEWS-Web**

Eine Kopie des PCNEWS-Web Stand Juni 1999.

/uc/-uc.htm

**8051-(C500)-Einführung****KEIL-Entwicklungssystem für 8051 (C500)****uProfi-51 mit KEIL-Compiler****80x51-Beispiele in C****Befehlsliste für 805xx-Mikroprozessoren****Links**

Die Linksammlung ist als letzter Abschnitt in dieser Aufstellung angegeben.

**Elektronikseiten von Viktor Sauer****EXBO Experimentierplatine**

Eine Kopie des Webs der HTL Klagenfurt, Stand Juni 1999.

Walter Waldner, Martin Schönbauer

/exbo.htm

**PCNEWS-Artikel**

Alle Artikel der PCNEWS betreffend 8-Bit-Mikrocontroller seit Ausgabe 24 (1991) im PDF-Format.

/\_pdf.htm

**µPROFI-51****µProfi-51 - was ist das eigentlich**

n38045.pdf

**HARDWARE-ERWEITERUNG zum µPROFI-51**

n24043.pdf

**µPROFI-537****80C537-Mikrocontroller Board****Peter Pramberger**

n52042.pdf

**Mikrocontrollerboard für 80C537 oder 80C517A****Hermann Schönbauer**

n49086.pdf

**ANLEITUNGEN****Assemblerdirektiven****Grete Kugler**

n24006.pdf

**AVSIM51**

n24021.pdf

**Die Bedienung des Assemblers ASM51**

n24014.pdf

**Externe Programmmodule in 805x-Programmen****Dieter Reiermann**

n24009.pdf

**ENTWICKLUNGEN****8052 - Disassembler**

n24032.pdf

**Dreiklanggong mit dem 8xC752**

n38049.pdf

**Schnittstelle PC 8052**

n24036.pdf

**8052 - - ASSEMBLER**

n24028.pdf

**Programme**

Die Programme dieser Sammlung stammen überwiegend aus verschiedenen Web-Quellen. Die Fundstellen sind im PCNEWS-Web unter "Links-ftp" angegeben.

/\_prg.htm

**~NN**

Nicht eingeordnete Programme. Eine Fundgrube!

~NN/.

**ASS****8051 disassembler version 2.2.**

/d51v22.zip

**8051 Macro Assembler v4.02a by 2500 A.D. Software**

/x8051.arj

**ASS51 - Crossassembler die Mikro-Controller-Familie MCS51 v1.40**

/ass51\_14.arj

**Assembler 80535-type**

Assembler 80535-type(804x,805x) processors v1.0 with Pascal source

/asm535.zip

**C source for an 8051 assembler, and a simple monitor from Ken Stauffer.**

/AS31.ZIP

**CAS— The 8051 C-Assembler**

CAS — The 8051 C-Assembler, full-featured one-pass 8051 assembler for MCS-51 family + 8051 DISASSEMBLER. All with C source

ASM/assem.zip

**Eine Sammlung von Assemblern für verschiedene CPUs**

ASM/Frankasm.zip

**Fast 3 pass 8051, 8048 and Z80 disassembler.**

ASM/d51V26.zip

**MetaLink's 8051 family macro assembler. (used in most of our app notes)**

ASM/ML-ASM51.ZIP

**Natural software systems - 8051 assembler ????**

ASM/as51intl.arj

**Natural software systems - 8051 assembler v1.00**

/a51.arj

**New and updated derivative model files for the MetaLink 80C51 assembler.**

ASM/models2.zip

**PseudoSam 8051 Cross Assembler**

PseudoSam 8051 Cross Assembler, V1.4.09 Assembler for 8051, write your .asm files with 8051 instructions and this assembler will generate the intel hex format file suitable to be uploaded to the 8051 memory  
ASM/A51.ZIP

**Table driven assembler for 8051, 8048, and other processors.**

ASM/tasm28.zip

**The 8051 assembler I use. That's it!!! by Wolfgang Heinz**

ASM/asm-51.zip

**Unbekannt**

ASM/m8051.zip

**Unbekannt**

/asm51.zip

**Unbekannt**

ASM/tasm30.zip

**Unbekannt**

ASM/d51v20b.zip

**Unbekannt**

ASM/cas.zip

**BAS****BASIC-52 for 8031/8051 in external EPROM**

BAS/BASIC31.ZIP

**Converts IBM BASIC to '51 assembly.**

BAS/BAS051.ZIP

**MetaLink ASM compatible tiny BASIC.**

BAS/TB51ML23.ZIP

**Source files for BASIC-52 interpreter.**

/BASIC-52.ZIP

**TinyBASIC for 8031, w/ source files.**

BAS/TB-51.ZIP

**Unbekannt**

BAS/tb-51.zip

**Unbekannt**

BAS/basic31a.zip

**C****AvCase-51 Demo C compiler**

C/avc51.arj

**C51 - Keil C Compiler**

C51 - Keil C Compiler Demo for 805x Microprocessor family with RTX tiny real-time multitask kernel  
C/keil8051.zip

**C51 compilers v3.20 and dScope-51 v5.01 (demo version)**

C/keilcd12.arj

**Demonstration version of the HI-TECH C compiler**

Demonstration version of the HI-TECH C compiler for the 8051 family. Limited 2 modules per project, each module limited to 500 lines of generated assembler or 512 bytes  
C/51demo.exe

**Demonstration version of the HI-TECH C compiler for the Philips XA microcontroller**

C/xademo.exe

**Freeware demo version of a commercial HI-TECH C cross-compiler for (among others) the 8051.**

C/z8051h83.exe

**MI-C C for 8051 v5x21**

C/c51.arj

**Unbekannt**

C/SDC51.ZIP

**DEB****80C51 code debugging tool from Axxon.**

DEB/DEBUG51.ZIP

**A re-written and expanded 8031 monitor based on Ron Stubbers' original one.**

DEB/MONPLUS.ZIP

**Combined RS751/DEBUG51 for RT apps.**

DEB/DB51KS.EXE

**EX8032 - DAS hochflexible Experimentiersystem mit 8032-Mikrocontroller**

DEB/ex8032.zip

**MONITR552 RTC-552 System Monitor v1.2**

DEB/mon552.asm

**PAULMON 8051 Debugger by Paul Storffregen (asm source)**

DEB/paulmon1.arj

**Simple minded monitor in C.**

DEB/mon.zip

**Simple minded monitor in C.**

DEB/MON.C

**Simple monitor routines for the 8031 with PseudoSam assembly source.**

/MON31-11.ZIP

**Small background monitor (614 bytes) for 8051**

/bm51.zip

**The 8052 rudimentary Debugger**

/debug.zip

**Unbekannt**

/debsrc.zip

**Unbekannt**

DEB/Add8051.zip

**Unbekannt**

DEB/pds225a.zip

**Unbekannt**

DEB/pds221.exe

**DIS****8048 Family Disassembler.**

DIS/DIS\_8048.zip

**8751 disassembler v1.2**

DIS/dasm51.zip

**DataSync's latest 8031/51 disassembler.**

DIS/DIS8051F.ZIP

**Disassembler for intel hex generated files**

DIS/DIS8051.ZIP

**Fast 3 pass 8051 disassembler.**

DIS/D51.ZIP

**Gary's Disassembler for the 8051 family of microprocessors v2.02**

DIS/gd8051.zip

**DOC****Microcontroller overview presentation in a Windows Powerpoint file.**

DOC/PPTA.ZIP

**Microcontroller technical presentation in a Windows Powerpoint file.**

DOC/PPTB.ZIP

**Unbekannt**

DOC/C51PRHTM.ZIP

**Unbekannt**

DOC/51hack.zip

**Unbekannt**

DOC/SUPTLIST.TXT

**Unbekannt**

DOC/dealers.txt

**Unbekannt**

DOC/C51PRIM.ZIP

**Unbekannt**

DOC/8051inf.txt

**Unbekannt**

DOC/8051faq.txt

**EXA****"Music box" program for 87C750**

Contains reusable code to generate audio tones and do timing  
EXA/music750.zip

**751 for the 7-bit digital video demo board.**

EXA/FRAME10.ASM

**8031 TELEPHONE # PULSE DIALER**

EXA/dialer.zip

**80C31 to generate DTMF and signaling tones BUSY, RING-BACK, etc.**

EXA/dtmf.zip

**80C552 C declarations for Franklin C.**

EXA/regc552.h

**80C552 declaration for Franklin asm.**

EXA/reg552.inc

**87C751 serial stream generator.**

EXA/SERIAL\_1.ASM

**8xC451 (from AN417) for a 256K printer buffer. Schematic in data book.**

EXA/PRN256K.ZIP

**8xC751 serial stream generator.**

EXA/SERIAL.ZIP

**A/D for the 'C552.**

EXA/AD1.ASM

**C routines for PCF8584 with application note AN95068**

EXA/pcx8584.exe

**Ceibo DS750 board usage notes (Ver 1.3 software)**

EXA/ds750.use

**check sums/ 9-bit RS-232, RS-422, RS-485**

EXA/crc.zip

**Decoding IR Remote controls with 8052**

EXA/ir-cntrl.zip

**Demo of extra external interrupts on C51 from AN420.**

EXA/intrupts.asm

**Demo of Integrated Development Environment of the Philips PDS-51 emulator for the 80C51 family.**

EXA/pds221.exe

**Demo program to distinguish warm & cold start conditions on 80C51 based parts.**

EXA/WARMBOOT.ZIP

**Demo program with a sample font and asm definitions for 8xC054 (MTV).**

EXA/MTV.ZIP

**Demonstration program for the A/D and PWM features of the 8xC752.**

EXA/DEMO752.ASM

**Displays the contents of the S87C752 A/D SFRs.**

EXA/coffey.asm

**Duplex software UART code for 751/752 from AN446.**

EXA/dupuart.zip

**EEPROM driver routines for the 8xC851. From app note EIE/AN91009.**

EXA/eeprm851.zip

**Example of automatic baud rate detection from AN447.**

EXA/autobaud.zip

**Example of real time clock fm Sytronics.**

EXA/CLOCK.ZIP

**Examples of Timer I used without I2C on the 8xC751/752 microcontrollers.**

EXA/TIMERI.ZIP

**Examples on how to write a midi controller, the 8051 assembly code included is also useful for study on how to control the serial ports and the timers.**

EXA/midi8751.asm

**Fletcher's checksum on an 8051**

EXA/checksum.a51

**Float-Point simple library**

EXA/fpa151.arj

**Font editor for the MTV (8xC054)**

Includes a sample character set

EXA/MTVFNTED.ZIP

**Ham Radio Keyer Using the 87C752.**

EXA/keyer.asm

**Hex load and program utilities for 8052 BASIC.**

EXA/hexutil.zip

**Intel HEX to Binary, w/ new features.**

EXA/hexbin.zip

**Interface to a Sharp infrared sensor**

Interface to a Sharp infrared sensor that can receive Phillips RC5 IR control codes, and send it as a string of bits to the uPC.

EXA/ircon.zip

**Keypad interface, reads keypad and echoes to screen**

EXA/key.asm

**Latest version of software for the LCPX programmer.**

EXA/lcpx5x.zip

**Module mouse.a51.**

Module mouse.a51. Firmware design and code for I2C desktop bus Mouse

EXA/abmouse.zip

**MTV demo code for on-screen display**

MTV demo code for on-screen display. Goes with Circuit Cellar Ink article fm '92.

EXA/cc16.zip

**Multi-byte math routines for the 8051**

EXA/MATH51.ZIP

**Multimaster I2C code for the 8xC751/752. From app note AN430.**

EXA/MM751.ZIP

**Sample 80C552 subroutines fm Sytronics.**

EXA/SAMPLES.ZIP

**Scroll a message across LCD display**

EXA/lcd.asm

**Simplex UART routines for the 751 & 752.**

EXA/RS751.ASM

**Source code for a fast battery charger using the 8xC751. From app note AN439.**

EXA/battchrg.c

**Source code for an IEEE maze navigating mouse using the 8xC751. From AN443.**

EXA/mazemous.zip

**Source for app note on '752 air flow measurement (AN429).**

EXA/AN429.ZIP

**Stepper Motor Driver**

EXA/drive.zip

**The 8051 Data Collection Unit.****The 8051 Data Collection Unit. Can handle up to 6 falling edge inputs concurrently at rates up to 400 Hz each**

EXA/data.zip

**Unbekannt**

EXA/canfiles.exe

**Unbekannt**

EXA/strngout.zip

**Unbekannt**

EXA/water.zip

**Unbekannt**

EXA/morse.asm

**Unbekannt**

EXA/lcdriver.zip

**Unbekannt**

EXA/keys.asm

**Unbekannt**

EXA/float51.zip

**Unbekannt**

EXA/x2d.asm

**Unbekannt**

EXA/crc1.zip

**Unbekannt**

EXA/ABMOUSE.ZIP

**Unbekannt**

EXA/51serial.zip

**Unbekannt**

EXA/dsm51.arj

**Updated software for the Philips LCPX5X40 EPROM microcontroller programmer**

Adds support for additional devices.

EXA/lcpx5x40.zip

**FLA****ETOX2 Flash Memory Support**

ETOX2 Flash Memory Support for MCS-51 Microcontroller family VER.2.0

FLA/51b1kdrv.zip

**Unbekannt**

FLA/f1disk1.zip

**Unbekannt**

FLA/f1disk2.

**FOR****CAMELFORTH FOR THE 8051 - ALPHA TEST VERSION - 17 DECEMBER 1994.**

This is an ALPHA TEST version of CamelForth/51, an ANSI Standard Forth for the Intel 8051 family of microprocessors.

FOR/cam51-11.zip

**Documentation for above**

FOR/f51docs.zip

**eFORTH environment for the 8051.**

FOR/EFORTH51.ZIP

**FORTH for 8031**

FOR/51forth.zip

**FORTH for 8051 family.**

FOR/FORTH51.ZIP

**FORTH System 80C552 ROM Version 2.0.**

Non-Standard Forth System for the Signetics 80C552 with ASM source

FOR/forth552.zip

**F-PC FORTH environment for the 8051.**

FOR/XD8051.ZIP

**I2C****8xC751 Multimaster I2C Routines. (replaces old 'Red Book' code)**

I2C/I2C751MM.ZIP

**ACCESS.bus mouse code from AN445.**

I2C/abmouse.zip

**Code app note AN425 using the 8584 I2C to parallel bus i/f with the 80C31.**

I2C/i2c8584.zip

**I2C bit banged routines for I2C peripherals including the 8591 A/D.**

I2C/i2cbits.zip

**I2C drivers for 8xC528 from app note AN438.**

I2C/I2C528.EXE

**I2C drivers for the 8xC552 with a C language interface.**

I2C/I2C552-C.ZIP

**I2C drivers for the 8xC751 and 752. From app note EIE/AN91007.**

I2C/mm751b.exe

**I2C Evaluation Board (part# S87C00K) control program (for 8xC751).**

I2C/I2CDEMO.ZIP

**I2C single master code for ANY 8051 type controller. 'Bit bangs' I2C on port pins**

I2C/I2CBITS.ASM

**I2C single master code for ANY 8051 type controller. 'Bit bangs' I2C on port pins**

I2C/i2cbits.zip

**I2C slave routines for the 87C751/752.**

I2C/I2CSLV.ZIP

**IIC\_OS multimaster drivers**

Updated IIC\_OS multimaster drivers for microcontrollers with byte I2C interfaces (552-type). From application note AN435.

I2C/an435a.exe

**Interfaces a standard PC/AT keyboard to the I2C bus. From AN434.**

I2C/i2cpckb.zip

**Lets 8xC751 do system init of I2C and other devices (via reset pulse).**

I2C/I2CINIT.zip

**Multimaster I2C code for the 8xC751/752. From app note AN430.**

I2C/mm751.zip

**Schematic of I2C printer port adapter.**

I2C/pci12cbd.zip

**Slave I2C functions for 8xC751/752 from AN433.**

I2C/slv751.zip

**Software V3.2 I2C PC printer port adapter (needs board in order to use).**

I2C/pci12c.zip

**Software V4.00 I2C PC printer port adapter (needs board in order to use).**  
I2C/tv400.exe

**Source code for the app note AN422 on single master I2C with the 8xC751/752.**  
I2C/i2capp.zip

**Unbekannt**  
I2C/\_0S.ZIP

**Unbekannt**  
I2C/frame10.asm

**Unbekannt**  
I2C/i2c\_528.exe

**Unbekannt**  
I2C/i2c\_552.exe

## IDE

**Compass/51 IDE v2.00 Disk 1**  
IDE/compass1.zip

**Compass/51 IDE v2.00 Disk 2**  
IDE/compass2.zip

**dScope-251 for Windows (tm) Evaluation Kit**  
IDE/keil251.zip

**KEIL Software 8051 Evaluation Kit 5.00**  
IDE/keil51dm.zip

**Unbekannt**  
IDE/ace51\_1.zip

**Unbekannt**  
IDE/ace51\_2.zip

## INTEL

Downloads vom Intel-ftp-Server.

**Unbekannt**  
INTEL/rism51x.a51

**Unbekannt**  
INTEL/rism51x.hex

**Unbekannt**  
INTEL/rism51x.lst

**Unbekannt**  
INTEL/serial51.pcx

**Unbekannt**  
INTEL/singen51.exe

**Unbekannt**  
INTEL/sio51x.pcx

**Unbekannt**  
INTEL/rism51gb.zip

**Unbekannt**  
INTEL/syssw.zip

**Unbekannt**  
INTEL/ap476.zip

**Unbekannt**  
INTEL/apbuilder51.zip

**Unbekannt**  
INTEL/t51erat.zip

**Unbekannt**  
INTEL/weed.zip

**Unbekannt**  
INTEL/sync.zip

**Unbekannt**  
INTEL/fxprog.zip

**Unbekannt**  
INTEL/8xc51xf0.zip

**Unbekannt**  
INTEL/basic52.zip

**Unbekannt**  
INTEL/blah

**Unbekannt**  
INTEL/blockmov.zip

**Unbekannt**  
INTEL/d51fx.exe

**Unbekannt**  
INTEL/51\_to\_96.zip

**Unbekannt**  
INTEL/51serial.zip

**Unbekannt**  
INTEL/emborcad.zip

**Unbekannt**  
INTEL/fbprog.zip

**Unbekannt**  
INTEL/51gbfx.zip

**Unbekannt**  
INTEL/51dvt001.zip

**Unbekannt**  
INTEL/hexobj.exe

**Unbekannt**  
INTEL/mcs51dem.zip

**Unbekannt**  
INTEL/omf51.exe

**Unbekannt**  
INTEL/novram.zip

**Unbekannt**  
INTEL/mcs51tim.zip

**Unbekannt**  
INTEL/progmr.zip

**Unbekannt**  
INTEL/iecm51.exe

**Unbekannt**  
INTEL/mcs51fx.zip

**Unbekannt**  
INTEL/mcs48tim.zip

**Unbekannt**  
INTEL/math32.zip

**Unbekannt**  
INTEL/longdiv.zip

**Unbekannt**  
INTEL/iecm51.man

**Unbekannt**  
INTEL/rism51.a51

## KEIL

Downloads vom KEIL-ftp-Server.

**8-Bit Checksum Calculator**  
CHECK8 calculates 8-bit checksums for your BINARY files and optionally stores the checksum in the target file.  
KEIL/check8.zip

**AMAKE Record Purge Utility**  
PURGE\_AM Removes AutoMake (AMAKE) records from your object files. Some third-party emulators and debuggers cannot handle the amake record types. PURGE\_AM only works on OMF-51 object modules generated by the 8051 tools.  
KEIL/purge\_am.zip

**AMD Header Files**  
Header files for the AMD 80C324, 80C521, 80C541, 80C321, 80C51, and 80C52  
KEIL/amd.zip

**ATMEL Header Files**  
Header files for the ATMEL 89C1051, 89C2051, 89C51, 89C52, 89LV51, and 89LV52  
KEIL/atmel.zip

**Binary to Intel HEX Converter**  
Use BIN2HEX to convert BINARY files to Intel HEX files.  
KEIL/bin2hex.zip

**Binary to Motorola S-Record Converter**  
Use BIN2MOT to convert BINARY files into Motorola S-Record files.  
KEIL/bin2mot.zip

**Bootloader Example Code**  
This ZIP file contains some example code the shows you for how to create a program with BOOT code in EPROM from 0000h to 7FFFh and an external program in FLASH from 8000h to 0FFFFh. The bootloader and FLASH programming code is not included in this example project.  
KEIL/bootload.zip

## DALLAS SEMICONDUCTOR Header Files

Header files for the Dallas Semiconductor DS2251(T), DS2252(T), DS5000, DS5001(FP), DS80C310, DS80C320, DS80C323, DS87C520, and DS8XC530.  
KEIL/dallas.zip

**DS5000T Real-Time Clock Routines**  
This ZIP includes RTCLOCK.C, a C file that contains routines for reading and setting the real-time clock in the DS5000T. A main program is also included with an example of how to set and read the RTC using the code provided. MicroVision and dScope project and ini files are also included.  
KEIL/ds5rtc.zip

**Intel HEX to BINARY File Converter**  
Use HEX2BIN to convert your Intel HEX files into BINARY files. You can use BINARY files with most EPROM programmers and you can easily use them for CRC or checksum calculations.  
KEIL/hex2bin.zip

## Interrupt-Driven Serial I/O Support for printf

This example program shows you how to use the printf library routine with interrupt-driven serial I/O. Interrupt-driven serial routines are included along with a demo program to printf and getchar some stuff. You can also use scanf with these routines. Serial I/O is handled in a separate file (SIO.C) that you can use in your own programs. Works with any 8051. Ring buffers are located in XDATA but it is easy to locate them anywhere.  
KEIL/intsio.zip

**MON51 HEX for the MCB520**  
This monitor uses timer 2 and serial port 0 with an oscillator running at 33MHz.  
KEIL/t2p0\_33.zip

**MON51 HEX for the MCB520**  
This monitor uses timer 2 and serial port 0 with an oscillator running at 11.0592MHz.  
KEIL/t2p0\_11.zip

**MON51 HEX for the MCB520**  
This monitor uses timer 1 and serial port 1 with an oscillator running at 33MHz.  
KEIL/t1p1\_33.zip

**MON51 HEX file for the MCB520**  
This monitor uses timer 1 and serial port 1 with an oscillator running at 11.0592MHz.  
KEIL/t1p1\_11.zip

**Motorola S-Record to BINARY File Converter**  
Use MOT2BIN to convert your Motorola S-Record files to BINARY files that you can use with most device programmers.  
KEIL/mot2bin.zip

**OKI Header Files**

Header files for the OKI Semiconductor 8xC154, 80c31F, and 80c51F.

KEIL/oki.zip

**PATHED - Full Path Editor**

This utility lets you add and delete path specifications from the DOS path stored in your environment. It is better than using the PATH variable in your batch files because PATHED searches for the parent environment and manipulates it directly.

KEIL/pathed.zip

**PCLint Update Files for C51**

This ZIP contains the latest error translator and LNT files for C51.

KEIL/c51lnt.

**Printf Semaphore Example with RTX51**

This example project shows how to use semaphores to protect a non-reentrant function like printf. In this example printf is called from multiple tasks. A binary semaphore is used to insure exclusive access to the printf function.

KEIL/pfsema.zip

**RTX51 Example for the Dallas Semiconductor 320 and 520**

This RTX51 Full example program uses several tasks to toggle pins on PORT 1 on the 320 or 520. This program gives you a short example of how to get RTX51 up and running with these chips. A HEX file is included so that you can program an EPROM and see the bits wiggle. This program works with the Keil MCB520 evaluation board

KEIL/rtx51-01.zip

**Unbekannt**

KEIL/ek51.zip

**Unbekannt**

KEIL/ek51d1.zip

**Unbekannt**

KEIL/ek51d2.zip

**Unbekannt**

KEIL/ek51d3.zip

**Unbekannt**

KEIL/omf51.zip

**LDR****8051 Bott Loader v3.0 Boot standard Intel hex format files**

LDR/boot3.asm

**Hex file Load-and-Go using 8051 UART.**

LDR/bootstrp.zip

**PASCAL****Unbekannt**

PASCAL/Embedded\_Pascal\_8051.zip

**Unbekannt**

PASCAL/Pascal\_8052.zip

**Unbekannt**

PASCAL/Pascal51.zip

**PL/M****PL/M cross-compiler**

PLM/plm51.zip

**Unbekannt**

PLM/PLM2C.ZIP

**Unbekannt**

PLM/Plm.zip

**RTS****8052 Real-time multi-tasking executive**

RTS/kernel.zip

**Unbekannt**

RTS/Terse.zip

**Unbekannt**

RTS/rtos.zip

**Unbekannt**

RTS/pcm.zip

**SCHARL****Full Debugger für µProfi-51**

RTS/Fsd51.zip

**SIM****8051 simulator v1.0 by Logical Systems Corporation**

SIM/sim51.arj

**Another simulator, this one is in pascal and it's not so usable and is more copy-righted. This one is in english but you cannot use the serial ports or interrupts**

SIM/v12.zip

**EMILY52 release 1.3**

EMILY52 release 1.3, 8051/8052 simulator/emulator from Dunfield Development Systems (fully functional, except that it does not provide support for the hardware emulation or serial redirection)

SIM/emily52.zip

**Emul-51(demo), emulators for the 8051 family**

SIM/nohau.arj

**Excellent and recommended 8051 simulator.**

The program is in german but it's fairly easy to use. Just start the program, upload the intel hex generated file [assembled with a51 for example] and then run the program in the simulator, you can test the timers

SIM/sim.zip

**HiTech Equipment Corporation 8051SIM (shareware version)**

SIM/sim51em.arj

**Light Version(v2.2) of The 80C166 Simulator by Hitex, HiTOOLS Inc.**

SIM/hisim166.zip

**Light Version(v2.2) of The 80C51 Simulator by Hitex, HiTOOLS Inc.**

SIM/hisim51.zip

**SIM51 v1.03 Simulator/Debugger 8051 CPU**

SIM/sim51\_04.arj

**Unbekannt**

SIM/fd51.arj

**Unbekannt**

SIM/simd.zip

**UTI****3rd Party Support Information**

UTI/suplist.txt

**8051 Resource FAQ; Lists Internet ftp sites, 8051 support vendors**

UTI/8051net.zip

**80C552 C declarations for Franklin C.**

UTI/REGC552.H

**80C552 declaration for Franklin asm.**

UTI/REG552.INC

**ACE51 disk 1/2**

ACE51 disk 1/2, on-line hypertext documentation and design tools for programming the 8xC51FX devices

UTI/ace51fx\_1.arj

**ACE51 disk 2/2**

UTI/ace51fx\_2.arj

**Converts music to 8052 BASIC PWM program.**

UTI/DEMO\_PWM.ZIP

**Enhanced File-Delete for DOS**

UTI/del120.zip

**GIF of schematic showing example hardware to interface 8051 to MIDI.**

UTI/midiloop.gif

**Hex to bin, bin to hex, and hex to hex conversion, for object file fixes.**

UTI/hexutils.zip

**Modified PL/M-51 library for use with 87C752.**

Modified PL/M-51 library for use with 87C752. The standard library won't work! Source code included. Must have Intel ASM51 and PLM51.

UTI/plm752.zip

**Orcad library element for 80C451 LCC.**

UTI/80C451

**Program to receive data at serial port COM1,2,3 and store it at a PC Disk File.**

Program to receive data at serial port COM1,2,3 and store it at a PC Disk File. . The cable needs only Tx, Rx and Ground. (Tx is not used). DSR and CTS is checked but if down will not stop the program. DOS command line style, user specify filename, port n

UTI/com2file.exe

**Program to transfer any PC file to its serial port COM1,2,3.**

Program to transfer any PC file to its serial port COM1,2,3. Easy operation to test or send data to microcontrollers, serial printers, etc. . The cable needs only Tx, Rx and Ground. (Rx is not used). DSR and CTS is checked but if down will not stop the pr

UTI/copy2com.exe

**Schematic of I2C PC printer port adapter**

UTI/PCI2CBD.ZIP

**Schematic symbol for use with Orcad.**

UTI/80C552

**Self extracting files containing artwork for adapter to allow programming the 87C550 in place of the 87C51.**

UTI/51to550.exe

**Software update for Philips LCPX5X programmer, adds 87C750 support.**

UTI/1cpx.zip

**Software V3.2 I2C PC printer port adapter (needs board in order to use).**

UTI/PCI2C.ZIP

**TSR help screens with most of the common 8051 device info - handy**

UTI/TUTOR51.ZIP

**Unbekannt**

UTI/ispdos.zip

**Unbekannt**

UTI/micronet.zip

**Unbekannt**

UTI/misc51.zip

**Unbekannt**

UTI/mpe\_arc.exe

**Unbekannt**

UTI/aexpdct1.exe

**Unbekannt**

UTI/new49.gif

**Unbekannt**

UTI/prog8252.exe

**Unbekannt**

UTI/ISP.EXE

**Unbekannt**

UTI/icache.exe

**Unbekannt**

UTI/fsisetup.exe

**Unbekannt**

UTI/crc16.exe

**Unbekannt**

UTI/asmproc.exe

**Unbekannt**

UTI/aec\_isp.zip

**Unbekannt**

UTI/87c654.zip

**Unbekannt**

UTI/avirtual.exe

**V1.4 firmware for V1.X SPGM-100 prgmrs.**

UTI/SPGMV14.ZIP

**V2.6 firmware for V2.X SPGM-100 prgmrs.**

UTI/SPGMV26.ZIP

**Projekte**

projekte/\_projekte.htm

 **$\mu$ C-FPGA Basiskarte**

Dipl.-Ing. Karl-Wilhelm Baier, HTL Leonding, Okt 1997

PROJEKTE/basis\_51.zip

**Drucksensor mit 80C522**

PROJEKTE/n24046.pdf

**Floppy-Ansteuerung**

PROJEKTE/Floppy.zip

**I2C und V24**

PROJEKTE/Iic.zip

**IDE-Harddisk-Steuerung**

PROJEKTE/harddisk.zip

**The House Automation Concept**

PROJEKTE/hac.zip

**TinyPro programmer for 87C51/89C51**

PROJEKTE/Tinyprog.zip

**Verschiedene Projekte**

PROJEKTE/embedded.zip

**Mikrocontroller-Links****51****51**

<http://www.eselsa.com.br/usuarios/irapuan/#Programador>

**8051 verschiedene Informationen**

<http://www.ece.umn.edu/~hjp/ee/>

**8051.com**

<http://www.8052.com/>

**8051-Homepage**

<http://www.ece.orst.edu/comp//>

**8052.COM - The Online 8052 Resource**

<http://www.8052.com/>

**80C537-Projekt deutsch**

[http://members.xoom.com/tobs/\\_projekt/](http://members.xoom.com/tobs/_projekt/)

**A Simplified Guide to Using the MCS(r)****51 On-chip UART**

<http://www.intel.com/design/mcs51/applnotes/2047.htm>

**Atmel 89C2051 In-Circuit Programmer**

<http://www.ece.orst.edu/~paul/8051-goodies/aicp-schematic.html>

**Bronto's Home Page**

<http://www.inx.de/~bronto/>

**Build Quik2051 The speedy 89C2051 programmer**

<http://www.concentric.net/~Sanjaya/svt/Quik2051.shtml>

**C51 Primer**

<http://www.hitex.com/automation/docs/c51primer/>

**Embedded Control**

<http://www.systronix.com/>

**Embedded systems research & development**

<http://www.goofee.com/>

**Example 8051 Board Design**

<http://www.ece.orst.edu/~paul/8051-goodies/dev-board-pcboard.html>

**GOOFEE-Karda Main Page**

<http://www.goofee.com/>

**Homepage of Carsten Groen****Embedded**

<http://www.magicio.com/cgroen/embedded.htm>

**Homepage of Carsten Groen**

The House Automation Concept

<http://www.magicio.com/cgroen/hac.htm>

**KITS, PRODUCTS, BARE BOARDS**

<http://www.io.org/~miclee/>

**Linkliste**

<http://www.goosee.com/.htm>

**Paul's**

Paul's 8051 Microcontroller Family

<http://www.ece.orst.edu/~paul/~goodies/goodies-index.html>

**Peter Averill's Atmel AT89C2051 Programmer**

[http://www.dontronics.com/pa\\_pgm.html](http://www.dontronics.com/pa_pgm.html)

**Sam's 8051 Page**

<http://www.powerup.com.au/~sam/8051/>

**The EE compendium**

[http://www.geocities.com/ResearchTriangle/ee\\_.html](http://www.geocities.com/ResearchTriangle/ee_.html)

**Tomi Engdahl's**

Tomi Engdahl's microprocessor and microcontroller pages

<http://www.hut.fi/Misc/Electronics/microprocessor.html>

**WICE51 - Microcontroller Page**

<http://www.geocities.com/SiliconValley/Vista/6521/wice51.html>

**Yet another 51 Page**

<http://www.rehn.org/YAM51/>

**BETRIEBSSYSTEME****CMX**

Operating System

<http://www.cmx.com/>

**CREEM**

Freeware Operating System with assembly source. Tiny, only 560 bytes. Multi-tasking, based on dataflow principles.

<http://www.goofee.com/creem.htm>

**RTXC**

<http://www.esphou.com/Download/Speps.asp>

**uCOS**

Freeware Operating System. There is a book on this. Has been ported to many micros. Here are 8051 ports:

<http://www.bart.nl/~revo> and  
<http://www.geocities.com/SiliconValley/Pines//>

**DISTRIBUTOREN****MTM-Systeme**

Starterkits

<http://www.mtm.at/starterkit.htm>

**MTM-Systeme**

<http://www.mtm.at/>

**Walter Rekirisch**

<http://www.rekirisch.com/>

**Willert Software Tools**

<http://www.schaumburg.de/wst/>

**Willert Software Tools**

<http://www.willert.de/>

**FTP****8051 and PC files**

<http://www.ustr.net/files/download.htm>

**8051-Archiv**

<ftp://ftp.unina.it> [/pub/Other/electronics/microprocs/other-archives/signetics-bbs/]

**8051-Archiv**

<ftp://ftp.keil.com/pub/updates/>

**8051-Archiv**

<ftp://ftp.giga.or.at> [/pub/ua/pc/art/m/]

**8051-Archiv**

<ftp://ftp.cdrom.com> [/1/inter-net/faqs/microcontroller-faq/8051/]

**8051-Archiv**

<ftp://ftp.nsk.su> [/3/micro-procs/mcs51/]

**8051-Archiv**

<ftp://ftp.edac.org> [/pub/bbs/forth/]

**8051-Archiv**

<ftp://ftp.ptt.js.cn/pub/syber/bin/>

**8051-Archiv**

<ftp://ftp.geophysik.tu-freiberg.de> [/pub/mirrors/ftp.funet.fi/pub/micro-procs/other-archives/signetics-bbs/]

**8051-Archiv**

<ftp://ftp.armory.com/pub/user/rstevew/8051/>

**8051-Archiv**

<ftp://ftp.psych.uni-hamburg.de> [/pub/80c51/]

**8051-Archiv**

<ftp://ftp.unina.it> [/pub/Other/electronics/ftp.armory.com/8051/]

**8051-Archiv**

Offizielles Hitex ftp-Archiv

<ftp://ftp.hte.com> [/pub/51tools/]

**8051-Archiv**

<ftp://ftp.ptt.js.cn/pub/syber/demo/>

**8051-Archiv**

<ftp://ftp.ai.uga.edu/pub/microcontrollers//>

**8051-Archiv**

<ftp://ftp.armory.com> [/pub/user/rstevew/8051/]

**8051-Archiv**

<ftp://ftp.funet.fi> [/pub/micro-procs/other-archives/signetics-bbs/]

**8051-Archiv**

Tiny Basic

[ftp://ftp.armory.com \[pub/user/rstevew/TB8051/\]](ftp://ftp.armory.com[/pub/user/rstevew/TB8051/])

**8051-Archiv**

[ftp://ftp.ai.uga.edu \[pub/microcontrollers/8051/\]](ftp://ftp.ai.uga.edu[/pub/microcontrollers/8051/])

**8051-Archiv**

[ftp://ftp.ai.uga.edu \[pub/user/rstevew/8051/\]](ftp://ftp.ai.uga.edu[/pub/user/rstevew/8051/])

**Freeware Pascal**

<ftp://sistudio.com/pub/atmel/pascal>

**Programmarchiv**

<ftp://oak.oakland.edu/Simtel/msdos/crossasm/>

**Programm-Archive**

<http://www.acs.oakland.edu/oak/>

**HERSTELLER****Atmel**

Atmel Homepage

<http://www.atmel.ru/Atmel/prod.htm>

**Chip-Index**

<http://www.hw.cz/docs/chipdir/n/.htm>

**Infineon Mikrocontroller Homepage**

Startseite im Internet für die (Siemens)/Infineon Mikrocontroller

<http://www.infineon.com/microcontrollers/>

**Intel**

<http://www.intel.com/design/mcs/>

**Intel**

<http://developer.intel.com/design/mcs/>

**Philips**

<http://www.semiconductors.philips.com/microcontrol/designcorner/c/>

**TriCore**

TriCore (32 bit  $\mu$ C,  $\mu$ P, DSP). Hier findet man die Symbiose aus Mikroprozessor ( $\mu$ P), Mikrocontroller ( $\mu$ C) und DSP (Digital Signal Prozessor).

<http://www.tri-core.com/>

**LERNEN****8051-Tutorial**

<http://www.vaultbbs.com/~csteiner/tut.htm>

**8051-Tutorial**

<http://www.8052.com/tutintro.htm>

**Begriffe für Compilermodelle und Variantentypen**

<http://www.keil.com/~market/>

**C51 Primer empfehlenswerte C-Regeln**

<http://www.ece.umn.edu/~hjp/ee/cprm/cprim.htm>

**C51-Primer**

<http://www.hitex.com/automation/docs/cprimer/cprim.htm>

**C51-Primer**

<http://icat.snu.ac.kr/hitex/docs/CPRIME/Cprim.htm>

**Designer Guide für Entwickler**

kostenlos

<http://www.hitex.demon.co.uk/c/cindex.html>

**Insider's Guide To Planning 166 Family Designs**

kostenlos

<http://www.hitex.demon.co.uk/book/des-a.htm>

**Manchester Encoding On The Siemens C505C And C515C**

<http://www.hitex.demon.co.uk/manchester.html>

**Microprocessor instruction set cards**

<http://www.comlab.ox.ac.uk/archive/cards.html>

**LITERATUR****Development Tools Partners Magazine**

Hier kann die Toolpartnerzeitschrift CONTACT kostenlos abonniert werden.

<http://www.spacetools.com/>

**Otmar Feger**

Hardware + Software Verlag

<http://www.otmar-feger.de/>

**Otmar Feger**

Hardware + Software Verlag

<http://ourworld.compuserve.com/homepages/ofeger/>

**SIMULATOREN****Jsim**

Freeware 8051 simulator

<http://home.t-online.de/home/JensAltmann/jsim-e.htm>

**SPRACHEN****Chris Hills 8051 & dscope Page**

<http://www.phaedsys.demon.co.uk/chris/chris.htm>

**Chris Hills 8051 & Keil Page**

<http://www.phaedsys.demon.co.uk/chris/chris.htm>

**Crossware Information 8051-developer**

<http://www.crossware.com/index.htm>

**EK51**

Keil C. EK51 evaluation kit (2K limit)

<http://www.keil.com/ek.htm>

**Embedded C++**

<http://www.caravan.net/ecplusplus/>

**Franklin ProView**

Freeware version of C compiler, assembler, and simulator, has 4K code size limit. Otherwise fully-featured and has enormous on-line help. Total file is 13M, so may be difficult to download. Simulator is excellent.

<http://www.fsinc.com/>

**Keil**

<http://www.keil.com/>

**MCS Basic****MCS Basic compiler**

[http://ourworld.compuserve.com/homepages/mcs\\_electronics/](http://ourworld.compuserve.com/homepages/mcs_electronics/)

**Metalink Assembler**

Freeware version.

<http://www.goofee.com/ml-asm.zip>

**Micros freeware C**

New Micros freeware C This is supplied free with New Micros' ultra-cheap 8051 board (US\$39).

<http://www.newmicros.com/>

**SDC51**

SDC51 freeware C compiler

<http://pw.netcom.com/~sandeepd/index.html>

**SPJ C compiler**

<http://www.spjsystems.com/>

**Tasking**

<http://www.tasking.com/products/C/>

**TOOLS****DAvE**

DAvE (Digitaler Applikationsingenieur). Hier können Updates für die DAvE-CD geholt werden.

<http://www.infineon.com/DAvE.html>

**MINIMON**

Dieses Tool muss man haben !

<http://stud.tuwien.ac.at/~e/minimon/minimon.htm>

**PHYTEC microMODUL-8051**

<http://www.phytec.com/USAmerica/Mm.html>

**UNTERRICHT****HTL Braunau**

div. Mikrocontrollerprojekte

<http://www.asn-linz.ac.at/schule/htlbraunau/lehrer/krammer/index.htm>

**Klagenfurter Unterrichtsserver**

Hier findet man alles zur Inbetriebnahme des C167CR Starterkits u.v.m.

<http://www.htblmo-klu.ac.at/lernten/siemens/index.htm>

**MicroConsult**

Schule für Mikroelektronik. Hier findet man Kurse für Ausbildung und Weiterbildung.

<http://www.microconsult.de/>

**Mikrocontroller Universität**

Im Siemens/Infineon Institut können viele, wertvolle Online-Kurse zwecks Ausbildung/Weiterbildung besucht werden

<http://www.mfuniversity.com/>

**TU Graz, Institut für Elektronik**

Hier findet man C167CR Kerne (Minimodule) und Kernöl

<http://www-ife.tu-graz.ac.at/Elektronik/Roehrer/Grurf/index.htm>

**TU Wien, Institut für Computertechnik**

Hier findet man ein Online Skriptum für den C167CR

<http://mc.ict.tuwien.ac.at/>

**Uni Linz, Institut für prakt. Informatik**

div. Mikrocontrollerprojekte

<http://www.ssw.uni-linz.ac.at/Staff/AK/AK.html>

**Uni Salzburg, Institut für Computerwissenschaften**

C167CR Fußballroboter

<http://www.cosy.sbg.ac.at/~robo1ab/>