

# CURRICULUM VITAE

## Keith Wilson B.Eng.(Hons.)

**VERSION: 10.2009**

A detailed project profile is also available upon request.

Personal Details:	
Name:	Keith Wilson B.Eng.(Hons.) Bachelor of Engineering with Honours
Date of Birth:	17.03.1972
Nationality:	British
Marital Status:	Single
Education:	<p><u>Victoria Avenue Primary School, Manchester</u> September 1977 - July 1983</p> <p><u>Plant Hill High Secondary School, Manchester</u> September 1983 - July 1988</p> <p><u>North Manchester Community College, Manchester</u> Study: Electrical and Electronic Engineering September 1988 - July 1990</p> <p><u>University Of Central Lancashire, Preston</u> Study: Electronic Engineering September 1990 - July 1994</p> <p>part of university course: <u>ERASMUS-Student-Exchange with the Fachhochschule Augsburg</u> February 1992 - June 1992</p>
Foreign Languages:	German (written and spoken)
Career:	<p><u>Siemens Nixdorf, Augsburg</u> part of university course: quality assurance measurements according to national and international standards (VDE,CSA,UL) September 1992 - July 1993</p> <p><u>Rheonik Messgeräte GmbH, Odelzhausen</u> as Electronic Engineer September 1994 - May 1998</p> <p><u>Dionex Softron GmbH, Germering</u> as Electronic Development Engineer June 1998 - December 2003</p> <p><u>Ingenieurbüro WEEng</u> since January 2004 as freelance Electronic Development Engineer Electronic Development (Analog, Digital, Microcontroller) Firmware Programming Printed Circuit Board Layout</p> <p><u>WEEng GmbH, Nohfelden Türkismühle</u> since January 2009: Managing Director, Senior Electronic Development Engineer</p>
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Technical Knowledge:	
Programming Languages:	Assembly, C, Visual-Basic
Microcontroller 8/16/32-bit:	Freescale: 56F (HAWK), S12 (STAR) Microchip: PIC12X, PIC16X, PIC18X Motorola: 68k, 68332 (CPU32) National Semiconductor: COP8 Philips: LPC2106 (ARM7) Renesas: M30290 (M16C29) Silicon Labs: C8051F04x ST Microelectronics: ST7 Andere: Z80, 6502, 6800, 8032, 8051
Hardware Development:	<u>Interfaces:</u> USB 1.1 / 2.0, Ethernet (LAN) IEEE 802.3, I2C (IIC), (Q)SPI, Dallas 1-wire LAN, RS232 (UART), Parallel (Centronics), ATA IDE (ATAPI), 3-wire (Bit banging: Data, Clock, Reset), LIN-, CAN-, FlexRay Bus Transceivers. <u>Motor Control:</u> Valves, Pumps, Stepper-, DC-Motors, 3-phase BLDC. <u>Displays:</u> LED-, Driver ICs, 7-Segments LED/LCD, LCD-Modules <u>Power Electronic:</u> DC/DC-Converters, SMPS (240W), H-bridge Controller (Mosfet Bridge), Peltier-Elements, Voltage Regulators <u>Analog Electronic:</u> Operational Amplifiers, Filters, Sensors (Temperature, Gas, Humidity, Hall sensors, Optosensors), Mosfets, Multiplexers, Relay drivers, Audio Amplifiers, ADC/DAC-Converters <u>Digital Electronic:</u> EEPROM, SRAM, Flash, PLD (programmable logic device), RTC (Real Time Clock), TTL-, CMOS Logic, digital potentiometer <u>Others:</u> Speech-synthesis ICs (SPO256, ISD25XX), DCF77 Radio Clock
Firmware Development:	<u>Programming:</u> Real Time (RTOS: Proprietary, MicroC/OS-II), Main loop and ISR (interrupt service routine) <u>Protocol Stacks:</u> USB 1.1/2.0 Client (Control, Bulk, Interrupt), TCP/IP (ARP-, ICMP-, IP-, UDP-, TCP-, SMTP Protocols). <u>Firmware Drivers:</u> RTC (Real Time Clock), Memory EEPROM (I2C, SPI), Flash, Keyboards, LCD-Modules, ADC/DAC-Converters, DCF77 Radio Clock, Motor Control Valve, LED-Driver ICs, Timer (PWM, Single-shot Capture), digital Temperature Sensors, Dallas 1-wire LAN
EMC:	Component Selection/Optimisation of Hardware, Measuring Techniques, PCB-Layout, Emission-/Susceptibility-Tests according to international standards (EN55011/22, IEC61000) in accredited laboratory, report of test results.
Software Tools:	Keil uVision IDE (C-Compiler, Linker, Assembler) Microsoft Office (Excel, Word, Visio, PowerPoint), StarOffice Microsoft Visual Studio (Source-Safe, Visual-Basic) Protel 99SE (Schaltplanentwurf, Leiterplattenlayout, Spice-Simulation) GNU C Compiler (ARM7) Toolchain GNU C Compiler (CPU32) Toolchain Microtec C Compiler Toolchain Arizona Microchip C Compiler Toolchain Arizona Microchip MPLAB (Firmware Entwicklungs-Umgebung) Altera MAXPLUS PLD Entwicklungsumgebung (Design, Simulation) LabVIEW (Messtechnik), Mathcad 12 (Worst-Case Berechnungen) Saber Mixed-Technology System Simulation (Sketch, Cosmos Scope) CANalyzer (Vector Informatik)
Hardware Tools:	Oszilloskope (Tektronix, Yokogawa, Agilent), Digitalmultimeter, Logik Analysator (HP), Funktionsgeneratoren (HP, Hameg) Spektrum-Analysator 150kHz - 1GHz (Hameg) Lauterbach Trace32 ICD (CPU32 In-Circuit Debugger)

	Ashling IDE (ARM7 Debugger), ST7 (Emulator) Arizona Microchip ICE2000 (In-Circuit Emulator) Wiggler BDM Debugger (und Visual Basic DLLs) Xilinx CPLD ISE 8.1
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<b>Further Education:</b>	
September 1998	3-day technical Workshop "COP8 Microcontroller"
March 1999	2-day technical Workshop "PIC Series Microcontroller"
September 1999	1-day seminar "Analog Devices signal conditioning design"
October 1999	1-day technical Workshop "Atmel AVR Microcontroller"
November 1999	1-day seminar "Texas Instruments linear design"
June 2001	1-day seminar "National Semiconductor analog design"
November 2002	3-day seminar "Embedded System Conference"
January 2004	3-day seminar "EMC for Printed Circuit Boards" 1-day seminar "EMC for Power Electronics"
September 2004	3-days seminar "RTOS Fundamentals"
October 2004	1-day technical Workshop "EMC Measurement Techniques"
February 2006	1-day seminar "EMC for Printed Circuit Boards"

<b>Awards:</b>	
June 1999	ST Microelectronic Developing Competition Project: Car Message Display System 4. Place <a href="http://private.addcom.de/KeithWilson/Projects/camed.htm">http://private.addcom.de/KeithWilson/Projects/camed.htm</a>
November 2000	ST Microelectronic Developing Competition Project: Speaking Clock for the Blind 1. Place - displayed at the Electronica 2000 Exhibition <a href="http://private.addcom.de/KeithWilson/Projects/speclo.htm">http://private.addcom.de/KeithWilson/Projects/speclo.htm</a>
June 2001	National Semiconductor Developing Competition Project: Post Tray Email Service (TCP/IP Embedded Device) Daily Winner and 5. Place <a href="http://private.addcom.de/KeithWilson/Projects/potres.htm">http://private.addcom.de/KeithWilson/Projects/potres.htm</a>