

PRESENTATION

This is a small but very motivated team of 4 Engineers with University 5-year MSc. degrees in the field of Electronics/Software/Telecommunications, with extremely high mutual working and symbiosis capabilities. It continues the inventive force of the founder of KulzerTEC (★1985), Dipl. Ing. Franz Kulzer, on a daily basis. Its main strength lies in our ability to still find critical/innovative/patentable solutions for clients with seemingly unresolvable problems. Extremely high creativity, work capacity, resilience, lean software and hardware development round up its profile. Everything that has to do with micro-controllers, analog/digital circuitry and embedded software in demanding areas, has been our professional *milieu* for almost 20 years.

The team sees itself as having extreme learning capability and willingness. We are also extremely adaptive to new/unexpected situations, highly expansive, flexible, enthusiastic and uncomplicated during personal contacts.

Our company website (www.kulzertec.com) depicts the combined strengths of this team (a few examples below):

- Programming and optimizing software for microcontrollers (MSP430/IAR, OKI, 6805, C167, ARC, PIC, 8051, etc.), with "C" (including "MISRA" conformity) and assembly; complete tool-chain setup and troubleshooting.
- Windows programming under .NET, WPF, C/C++/C#/VisualBasic and Matlab Simulink (incl. GUIs).
- Scripting programming with VBA for Office, Windows PowerShell, Linux Bash und Python.
- Development/optimization embedded O.S. (LINUX, VxWorks, FreeRTOS) drivers and other software components.
- Automotive: motronic, chassis/engine, function development/testing in ASCET-SD and Matlab Simulink, calibration, sensors, actuators, Lambda/Oxygen-sensors, knocking, datalogging, displays, ECU realtime O.S., etc.
- FPGA/SOC logics and video development/troubleshooting in VHDL for XILINX (ZYNQ, etc.) and ALTERA.
- Schematics and PCB development with Protel/Altium Designer.
- Communications protocols such as SPI, RS232, I2C, CAN, KWP2000, Bluetooth, TCP/IP, etc., as well as development of projects involving USB 1.1 and USB 2.0 (with FTDI and Cypress chips).
- Development, implementation, simulation and testing/troubleshooting of complex analog and digital circuitry.
- Code speed/size optimizations, time-critical and difficult debugging/troubleshooting, bug-fixing, source-code embellishment, bootloaders at Assembly/hardware levels and many other special areas.
- Chip/ASIC characterization, verification, validation and debugging, for sensors and DC-DC converter.
- µCode development, optimisation, troubleshooting in the complex MC33816 high-voltage Freescale injection Chip.
- Any kind of very low-level hardware-near firmware/software/driver/bootloader development and troubleshooting
- Advanced hardware and software tools already in place in our labs, include: compilers, multimeters, oscilloscopes (e.g. MSO5402), frequency generators, network analyzer (e.g. BODE100), serial protocol analyzers, soldering/rework µ-wave/hot-air stations (down to 0402 form factor and BGA 400µm pitch), etc.

In case you need special help and/or refined solutions for intricate technical problems or complex project issues, you just found the right team! Our broad range of expertise and internal synergy allows us to offer interesting solutions.

Tell us about your problem details, We can then integrate intelligent simplicity into a customized solution!

This team accepts all kinds of consulting/development tasks. Home-office possibilities are preferred, including traveling and on-site work (up to 50% of the time, exceptions negotiable). Competitive prices depend on the projects' type/duration, encompassing homeoffice work (typical €/h basis w/ separate traveling costs) as well as all-inclusive rate. We successfully work in HO for several large companies even after short local training/visiting.

Working with highly confidential software, hardware, IPs, NDAs and corresponding documentation, as well as to using standard security measures (Encryption/PGP/RSA-SecurID) to protect it, has been common-place for us.

Best Regards and Thanks for wanting to know more about us!

Eng. Pedro Kulzer, PhD (CEO), Eng. Paulo Martins, Eng. Filipe Teixeira and Eng. Nelson Bernardino

(PS: Paulo received an official prize for his outstanding Engineering performance at Texas Instruments – more at www.kulzertec.com)

PS: CEO Pedro Kulzer comes from the automotive area electronics and software, having been 4 years at Bosch Motorsport (Stuttgart, Germany), still actively supplying that department with constant highest quality complex embedded software for various micro-controller/FPGA based "motronic" ECUs.

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