



DICE

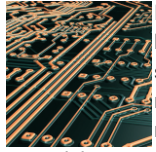
Danube Integrated
Circuit Engineering

Danube Integrated Circuit Engineering

DICE is a dynamic and fast-growing company in the field of microelectronics with a strong focus on research and development. We design innovative, leading-edge Application-Specific Integrated Circuits (ASICs) for the communications industry, with particular emphasis on wireless products. We are currently looking for internships and diplomands to strengthen our engineering team for future challenges.

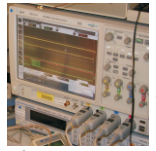
Internships and Diploma Thesis:

PCB and Hardware Prototypes



Requirement analysis, component-selection, schematics, board layout, assembly/soldering/modification, continuous support of board users; Design, implementation, using miniature SMD-parts (BGA, 0201), testing and maintenance of GSM/UMTS/LTE hardware prototypes comprising serial high-speed DigRF interfaces of up to 1.5Gbit/sec. **Skills/Interests:** Customer orientation, Analog and Digital Circuit Design, SMD/BGA-Rework-Soldering, Layout and Simulation Tools (Altium DXP Designer, SPICE), RF-Basics

Verification of Digital Functionality in RF-Transceivers



Compilation and execution of tests for the digital logic in RF-ICs; Programming and debugging of microprocessor based testcases in Small-C; Test execution, data formatting and compilation of measurement protocols. **Skills/Interests:** Programming of embedded microprocessors in C/C++, Digital Circuitry Knowhow, Measurement Techniques (Logic Analyzer, Scope), RF-Basics

GSM/UMTS/LTE Transceiver System Engineering



Matlab based LTE Uplink Signal Generator according to 3GPP specification - enhancement of existing internal simulation environment; System C based verification environment for pre-silicon signal processing verification.

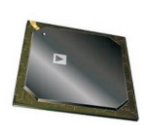
Skills/Interests: Cellular basics, Matlab, SystemC

Flexible RF-Switching Matrix for highly automated transceiver RX measurements



Collect requirements from RX Specialists; Conduct feasibility study; Develop implementation proposal; Simulation of selected solution; Hardware implementation and real-world startup. **Skills/Interests:** RF basics (2G/3G/4G), RF measurement hardware knowledge, Matlab

Configurable DSP building blocks for 2G/3G/4G RF transceivers



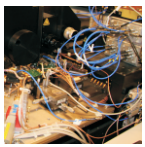
Implementation of power-efficient, scalable, and reconfigurable DSP building blocks from algorithmic descriptions (in CoCentric SystemStudio). **Skills/Interests:** SystemC, VHDL Simulation and Synthesis, computer architecture, embedded computing, signal processing

IP Design & Verification for Camera Interface



Concept, design & verification of image processing blocks for mobile-devices and/or automotive applications; SystemC (and/or on demand Matlab) prototype implementation, co-simulation and refinement to VHDL/Verilog RTL design; FPGA prototyping and trial ASIC synthesis (VHDL, Verilog, SystemC, Matlab). **Skills/Interests:** Verilog, SystemC, Matlab

Automation of RF-IC Verification and Measurement



Automation of test measurement cycles (lab-regressions) of numerous RF-IC samples under varying temperature and voltage conditions; GPIB/RS232/ethernet based device control using the Perl script language, and Frameworks of Mathworks or National Instruments; SQL database link for data collection. **Skills/Interests:** Programming of Windows Applications in languages such as C/C++/SQL/Visual Basic/Perl or Python, Measurement Basics (Scope, GPIB, LabView), RF-Basics

HW/SW Engineering for RF Transceiver Evaluation



Software and FPGA-Firmware for GSM/UMTS/LTE RF-IC demonstration kits; "C"-based programming of Windows and IBM PowerPC/virtual machines; VHDL-programming of Virtex5 FPGAs with embedded PowerPC core; Digital signal processing of I/Q symbols via serial DigRF interfaces operating at speeds up to 1.5 Gbit/se. **Skills/Interests:** Xilinx ISE/EDK Toolchain, VHDL, Programming of embedded microprocessors in C/C++, Interfaces like USB/RS232/SPI

For further information please look at www.dice.at. If you want to join an international, dynamic team and participate in the development of state-of-the-art technology for tomorrow, do not hesitate to send your application (zip or pdf) to office@dice.at.

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