

**Infineon Technologies AG**, Neubiberg, Germany, offers semiconductor and system solutions addressing three central challenges to modern society: energy efficiency, mobility, and security. In the 2010 fiscal year (ending September 30), the company reported sales of Euro 3.295 billion with approximately 26,650 employees worldwide. With a global presence, Infineon operates through its subsidiaries in the U.S. from Milpitas, CA, in the Asia-Pacific region from Singapore, and in Japan from Tokyo. Infineon is listed on the Frankfurt Stock Exchange (ticker symbol: IFX) and in the USA on the over-the-counter market OTCQX International Premier (ticker symbol: IFNNY).

**Infineon Technologies Xi'an Co. Ltd.**, established in June, 2003, is located in Xi'an High-Tech Industries Development Zone. The company is focused on creating innovative products in the fields of communications; developing Integrated circuits for new applications (system-on-chip integration) and supporting Infineon globally by IC design implementation at the lowest possible cost. Infineon Technologies Xi'an Co. Ltd. is one of the most important R&D Centers all over the world within Infineon.

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### **Job Profile List:**

1. HWA (HW architecture) Concept Engineer **Urgent!!!**
2. HWA (HW architecture) Concept Engineering Manager **Urgent!!!**
3. MOD (Modem) L1P Concept Engineer for TD-SCDMA **Urgent!!!**
4. MOD (Modem) Concept Engineer for FW Architect TD-SCDMA/ TD-LTE **Urgent!!!**
5. MOD (Modem) Concept Engineer for DSP FW Architect 2G **Urgent!!!**
6. Platform Concept Engineer **Urgent!!!**
7. Platform Concept Engineer (Feature Requirement Management) **Urgent!!!**
8. Digital Design and Verification Engineer
9. Design for Test (DFT) Engineer
10. Application Engineer for 3G Firmware of Cellular Devices
11. Component Verification Engineer
12. Logic Physical Synthesis Engineer

## 1. HWA (HW architecture) Concept Engineer Urgent!!!

### Job Description:

As a member of Concept Engineering Hardware Architecture team that specifies the solutions for 2.5G and 3G handset baseband chips, the candidate will be responsible for the Digital Baseband portion of the solution. This includes the overall HW architecture meeting the functionality and performance specified by the System Requirements. The candidate would be responsible for generating the Sub-System Requirements, allocating the system requirements to the different baseband subsystems of the solution and specifying the implementation architecture to meet the requirements. The responsibilities of the Hardware Architect include some or all of the following:

- Definition of Digital Baseband HW architecture
  - Deep understanding of ARM/DSP based SoC architectures, bus architectures, peripherals, and security features.
  - Ability to design, implement, and simulate system models for architecture trade-off and bandwidth analysis
- Understanding of power savings techniques, technology, and algorithms
  - Ability to review and analyze process technologies and process options in support of low power design
  - Understanding of low power IC design architectures and system design architectures.
- Understanding of GSM/GPRS/UMTS Handset systems
  - Digital baseband HW architectures and interfaces
  - Analog baseband HW architectures and interfaces
  - Power management IC HW architectures and interfaces
  - Radio/RF HW architectures and interfaces
  - Knowledge of external component functionality and interfaces: memory, display, camera, external memory cards, connectivity (USB, BT, etc.)
- Understanding of IC design process and designs
  - Process technologies, standard cell libraries, memories, PLL' s, clock generation, I/O buffers-
  - IC design, simulation, and testing methodologies
- Comprehend and communicate competitor Digital Baseband architectures and capabilities.
- Develop System Functional specifications that will be used to guide the Development organizations during product development.
- Generate system level requirements for the Digital Baseband portion of a product based on Marketing Requirements Document and industry norms.

### Requirements:

- Ph.D or Master Degree on Electronics Engineering/Communication/ Microelectronics or relevant

- Minimum 7 years Engineering experience, 10 years Engineering experience will be preferred
- Experience with ARM based SoC architecture solutions
- Excellent communicator
- Must be able to work with people in many different cultures and in off-site locations
- Excellent team player
- Quick learner
- Able to deliver quality products on schedule
- Willing to work within a sensible development process framework
- Committed to documenting the development work
- The following skills and Experiences will be preferred:
  - Proven experimental skills and lab/bench expertise
  - Experience with system feature requirements development and management
  - Experience with DSP and/or ARM embedded processor development.
  - Experience with 3GPP Standard
  - Experience with the SW and/or HW development of Communication systems
  - Experience with low power design
  - Experience with system modeling tools

## 2. HWA (HW architecture) Concept Engineering Manager Urgent!!!

### **Job Description:**

Build up and lead a world class hardware architecture team as a subgroup of the world wide HWA department to maintain leading edge hardware architecture/solutions for mobile terminals

- Develops the team to cope with current and future challenges for baseband chip hardware architecture
- Develops effective relationships with customers, contractors, clients, universities and partners.
- Responsible for proposing, developing and implementing leading edge architectural and IPR solutions for mobile terminal baseband/hardware projects and products
- Responsible for the development and continuous improvement of tools and methodologies relate to the HWA deliverables
- Handles all aspects of team's performance management.
- Staffing, recruitment and integration of new employees
- Teambuilding, coaching, conflict management and fostering Infineon's values
- Interfaces with the Component Development team, program management, and project management to resolve technical issues, to allocate resources to projects and to satisfy customer needs.
- Responsible for project planning for HWA team activities, as well as on time and within scope HWA deliverables to projects
- Applies lessons learned from current customer/platform issues to enhance future HW architectures, as well as influencing HW/SW partitioning
- Serves as communication link between his team and management in order to cascade goals and strategy downwards and to surface issues upwards.
- Supports marketing and sales in discussions with customers, partners and operators
- Full responsibility for functional budget to include but not limited to; functional HC, expense, capital equipment, T&L and training
- Leads a team of 5-10 hardware architect Engineers

### **Requirements:**

- Ph.D or Masters degree of communication engineering or related field
- Minimum 7 years experience as functional manager in a Integrated Circuit company
- Minimum 8 years experience in a hardware architecture/development organization in the baseband mobile phone business
- Efficient, cost-effective team with rich blend of key competencies
- Highly motivated, high performance team which attracts high caliber concept engineers from other companies
- Continuous improvement of hardware architecture (cost, performance, functionality)

- Reduction of customization costs by ensuring high re-use of existing HW IP
- Excellent Communication with Project Managers, Program Managers, and the other development organizations
- Performance management including 100% of objectives set for all employees; full compliance with spirit and intent of STEPs process
- Achievement of personal and team objectives; focus on “what” and “how”
- Fluent in spoken and written English

### **3. MOD (Modem) L1P Concept Engineer for TD-SCDMA Urgent!!!**

#### **Job Description:**

- Perform Research in the area of wireless communication mainly focusing on TD-SCDMA L1, EDGE evolution, 3G, 4G and LTE
- Take responsibility for defining detailed implementation specification based on feature requirement for implementation team
- Take responsibility for software and hardware partition for wireless transceiver
- Take responsibility for defining detailed implementation specification of algorithm for wireless transceiver
- Take responsibility for defining hardware interfaces and system resources according to performance requirements
- Modeling and Simulation of Signal Processing Blocks
- Modeling and Simulation of bandwidth and performance requirements
- System level modeling and reference data generation for verification
- Take responsibility for verification objective review
- Take responsibility for defining use case of block
- Tracking and participating in standardization process

#### **Requirements:**

- Ph.D or Master Degree Electronics Engineering/signal processing/wireless Communication/telecommunication or relevant.
- Good knowledge of wireless communication system standard, prefer experience in TD-SCDMA
- Good knowledge of digital signal processing
- Good understanding of modulation and demodulation algorithms for wireless communication
- Good communication skill and good team work
- Good knowledge of MATLAB, CoCentric and SystemC is preferred
- Experienced in VHDL /Verilog coding is preferred.

#### **4. MOD (Modem) Concept Engineer for FW Architect TD-SCDMA/ TD-LTE Urgent!!!**

##### **Job Description:**

Definition and design of Layer 1 Firmware for the TD-SCDMA/TD-LTE wireless standard.

- Architecture definition for TD-SCDMA/TD-LTE firmware
  - Mapping of TD-SCDMA/TD-LTE features and standard requirements to FW and algorithm requirements
  - Breakdown of requirements into FW components
  - Identify all relevant FW aspects for the TD-SCDMA/TD-LTE standard
  - Define scheduling and task priorities of FW components with respect to given real-time constraints and system resources (MIPS, memory) in a TD-SCDMA/TD-LTE system
- Concepts for partitioning between HW and FW (HW/FW split) in a TD-SCDMA system
- Verification concepts for TD-SCDMA/TD-LTE FW on block and system level
- Planning and selection of scheduling software
- Provide guidelines for implementation aspects of modem algorithms in a TD-SCDMA/TD-LTE system
- Customer interface for TD-SCDMA/TD-LTE FW related topics

##### **Requirements:**

- Ph.D or Master degree in Electrical Engineering with focus on Communications Engineering
- Expert knowledge in Digital Signal Processing and Communications Engineering
- Proven experience in implementing DSP FW for 3GPP Standards like TD-SCDMA/TD-LTE or UMTS
- Experience in SW/FW design for embedded real-time systems
- Fluent in spoken and written English

## **5. MOD (Modem) Concept Engineer for DSP FW Architect 2G**

**Urgent!!!**

### **Job Description:**

Definition and design of DSP Firmware for 2G (GSM, GPRS, EDGE, EDGE Evolution) wireless baseband applications.

- Architecture definition for 2G DSP firmware
  - Mapping of given 2G features and algorithms to DSP FW requirements
  - Breakdown of requirements into FW components
  - Identify all relevant FW aspects in a 2G wireless system
  - Define scheduling and task priorities of FW components with respect to given real-time constraints and system resources (MIPS, memory) in a 2G system
- Concepts for partitioning between HW and FW (HW/FW split)
- Interface definition of HW accelerator blocks for selected DSP tasks
- Planning and selection of scheduling software for real-time operation in a 2G system
- Verification concepts for DSP FW on block and system level
- Provide guidelines for implementation aspects of modem algorithms (how can this algorithm be implemented)
- Support definition and design of HW accelerator blocks for selected DSP tasks

### **Requirements:**

- Ph.D or master degree in Electrical Engineering with focus on Communications Engineering
- Expert knowledge in Digital Signal Processing and Communications Engineering
- Proven experience in implementing DSP FW for 3GPP Standards like GSM or UMTS
- Experience in SW/FW design for embedded real-time systems
- Good knowledge on optimised implementations of DSP algorithms
- Fluent in spoken and written English



## 6. Platform Concept Engineer Urgent!!!

### Job Description:

- Responsible for quality and completeness of customer and system requirements for mobile phone platforms and components. About 2 projects in parallel with 1000 - 2000 requirements each depending on project scope.
- Participation in continuous improvement activities for requirements management and engineering.
- Product Requirements Management
  - Overall responsibility for Requirements Repository and documents
  - Gathering and elicitation of requirements/ needs from stakeholders
  - Requirements interface between the development team and internal and external customers/ stakeholders
  - Supports mapping of requirements to components
  - Monitors and tracks: quality of requirements and traceability
  - Drives requirement reviews
  - Requirements change handling/ participation in CCBs
  - Answers request for information together with sales, marketing and technical experts.
- Participation in continuous improvement activities
  - Alignment across chip and platforms projects in regular meetings
  - Provide customer requirements for reuse
  - Participate in continuous process and methodology improvement (TEC RE)
- Be internal and external interfaces operate on an international basis.
  - Internal: Business Line Marketing and System / Concept Engineering, Verification Management, Project and Program Management, Quality Management.
  - External: IFX customers.

### Requirements:

- Ph.D or Master Degree on Electronics Engineering/Communication/ Microelectronics or relevant
- Professional experience in System Engineering or related disciplines
- Fluent in English
- Good expertise in Requirements Management
- Rational Requisite Pro
- MS Office (desirable including VBA)
- Adobe Framemaker (desirable)
- Social and communicative skills
- Self-organization

## **7. Platform Concept Engineer (Feature Requirement Management)**

**Urgent!!!**

### **Job Description:**

- Responsible for quality and completeness of customer and system requirements for mobile phone platforms and components, about 2 projects in parallel with 1000 - 2000 requirements each depending on project scope
- Participation in continuous improvement activities for requirements management and engineering
- Product Requirements Management
  - Overall responsibility for Requirements Repository and Documents
  - Gathering and elicitation of requirements/ needs from stakeholders
  - Requirements interface between the development team and internal and external customers/ stakeholders
  - Supports mapping of requirements to components
  - Monitors and tracks: quality of requirements and traceability
  - Drives requirement reviews
  - Requirements change handling/ participation in CCBs
  - Answers requests for information together with sales, marketing and technical experts
- Participation in continuous improvement activities
  - Alignment across platforms and customer projects in regular meetings
  - Provide customer requirements for reuse
  - Participate in continuous process and methodology improvement (TEC RE)
- Both internal and external interfaces operate on an international basis.
  - Internal: Business Line Marketing and System Engineering, Verification Management, Project and Program Management, Quality Management.
  - External: IFX customers and Network operators.

### **Requirements:**

- Master in EE or equivalent
- 3 years + experience in relevant field
- Professional experience in System Engineering or related disciplines
- Good knowledge of IFX development processes with focus on System/Product Definition is a plus
- Fluent in English
- Good expertise in Requirements Management
- Rational Requisite Pro
- MS Office (desirable including VBA)
- Adobe Framemaker (desirable)
- Social and communicative skills
- Self-organization

## 8. Digital Design and Verification Engineer

### Job Description:

- Interface to Hardware Architects (Concept Engineering) and Physical Implementation Team
- Assisting clock, reset and power concept definition together with Concept Engineering
- Defining design implementation specification (module or sub-system level)
- VHDL or Verilog Coding
- Internal and/or external IP integration
- Test-bench generation and test-case preparation according to verification plan
- Gate-level simulation
- Test pattern generation (interface to IC Test Development Engineer) and debug support
- Timing constraint definition/review (interface to Physical Implementation Team)
- STA timing analysis support (interface to Physical Implementation Team)

### Requirements:

- Masters/Bachelor's Degree in Electrical/Electronics Engineering or in related field
- knowledge requirements:
  - Familiar with mainstream simulators (Modelsim and/or Affirma)
  - Scripting/programming languages (PERL and/or TCL and/or C, etc)
  - Knowledge on Design Compiler
  - Understanding of timing analysis and physical implementation
  - Understanding of DFT (Design for Test) concept
- Fluent in spoken and written English (CET6 is desired)
- Self-motivated team player and able to work with minimum supervision
- Familiar with Hardware Description Languages (VHDL and/or Verilog)

## 9. Design for Test (DFT) Engineer

### Job Description:

Implement Design for Test strategy into the chip and responsible for DFT sign off. Participate in driving new DFT methodology and solutions to improve quality, reliability and in system test and debug capability.

- Working out DFT concept, aligning with designer.
- Implement basic DFT schemes in terms of BIST, scan, boundary scan on chip.
- Generate tests which achieve highest possible component test coverage with lowest overhead.
- Verify all DFT logics and test patterns with simulation and static timing analysis tool.
- Implement and verify advanced DFT logics like logic BIST, high speed interface test logic etc.
- Participate in new DFT methodology discussion and solution generation.
- Work with design team.

### Requirements:

- Typically requires MSEE/CS combined with 5+ years experience, or BSEE/CS combined with 7+ yrs experience.
- Good knowledge in Design for Test in general. Understand the concepts of BIST, SCAN, JTAG, ATPG.
- Experience in DFT design, Testability, and Reliability issues.
- Hands on familiarity with various DFT analysis, and verification tools.
- Hands on knowledge of simulation and verification debug tools.
- Good knowledge of test engineering in terms of test program generation, understanding of testers and associated hardware is a plus.
- Working knowledge using Verilog HDL languages and tools, scripting and programming languages (Perl, TCL, C and C++).
- Experience in complete DFT flow from beginning to tapeout.
- Excellent written and verbal communications, team and people skills.

## **10. Application Engineer for 3G Firmware of Cellular Devices**

### **Job Description:**

- Understand the IFX solution for dual mode 2G / 3G cellular devices
- Pre-analyze and solve customer system issues with special focus on layer1 3G firmware
- Track and coordinate further analysis of 3G FW related issues and report results to customer
- Onsite technical support mainly for Chinese and Asian customers
- Build and release of customer specific 3G firmware (ClearCase based versioning)
- Validation of 3G firmware using existing regression test system
- Preparation of application notes
- Preparation of training material and performing trainings
- Verification support for platform or digital baseband issues

### **Requirements:**

- Basic project management skills
- Basic knowledge regarding configuration management
- Programming skills (C / C++)
- Knowledge of communication systems, cellular systems preferred (GSM / GPRS / EDGE / UMTS / HSxPA)
- Knowledge of microprocessor systems and their debugging possibilities
- Experience with lab equipment
- Good communication skills, Team Player
- Fluent in English

## 11. Component Verification Engineer

### Job Description:

Hardware System Validation of Baseband ICs and peripheral for Mobile Terminals Technical coordination possible depending on experience and skills

- Functional verification of the baseband IC and analyze of the occurring problems
- Definition and implementation of test cases for the different modules(HW/SW, Low level drivers)
- Lead internal customer support during the evaluation phase
- Interface to Concept Engineering Team, Component Verification Team, DFV Team, System Team

### Requirements:

- Above Bachelor Degree in Electrical/Electronics Engineering or equivalent
- Minimum 2 years experience with the following tools/domains are recommended:
  - Knowledge of Embedded system
  - ARM Tools (ADS) know how
  - Script languages (GNU Make, Make, Make File structures)
  - Debug Tooling Multi-ICE, Lauterbach
  - RTOS Symbian, Nucleus, Linux or equivalent
  - Usage of C models (Virtual Prototype) to test Software before silicon availability
  - Configuration Management (Versioning Tools: ClearCase)
- Knowledge of the following cores/architecture concepts are recommended:
  - ARM 7/9/11 Series
  - Multimedia concept: JPEG, MPEG, Camera, Display, Card Storage devices ...
  - Interrupt Handler and DMA Concepts
  - Standard Interfaces (USART, SSC, I2C, USB HS, USB FS, USB HSIC, MIPI HSI, SlimBus, MIPI Unipro...)
  - Memory devices (DDR1, DDR2, SDRAM, Mobile RAM, NAND and NOR Flash)
  - WLAN
  - BlueTooth
  - GPS
  - FMR
- Good English, Excellent communication skill and team spirit oriented

## 12. Logic Physical Synthesis Engineer

### Job Description:

- Interface with IC Design/Verification team (timing and power constraints definition)
- Writing, running, optimization of logic and physical synthesis scripts
- In-depth knowledge of STA. Ability to handle timing analysis for multiple modes and corners
- Physical design Floor planning, place & route, clock tree synthesis, routing cleanup
- Power IR & EM analysis
- Parasitic extraction/SPEF/SDF generation
- Prime Time/ICC STA correlation
- Formal Verification (Equivalence checking)
- Physical Verification (DRC, ERC, LVS, ANTENNA)
- Deep understanding of DSM effects (sub 90 nm experience preferred)

### Requirements:

- Masters/Bachelor's Degree in Electrical/Electronics Engineering or in related field
- Tool skills:
  - Synopsys Design Compiler and Power Compiler
  - PERL, TCL languages
  - Prime Time and constraint creation/modification
  - IR analysis tool such as PrimeRail
  - Synopsys ICC experience preferred
  - Calibre and/or Assura
  - Formal Verification tool
  - Knowledge of VHDL or Verilog is a plus
  - RTL Hand-off checks (SpyGlass) and Design Doc. is necessary
- Ability to speak and write English is a must, CET 6
- Self-motivated team player and able to work with minimum supervision
- Minimum 2 years of physical design and timing closure experience
- Willingness to take overseas business trip