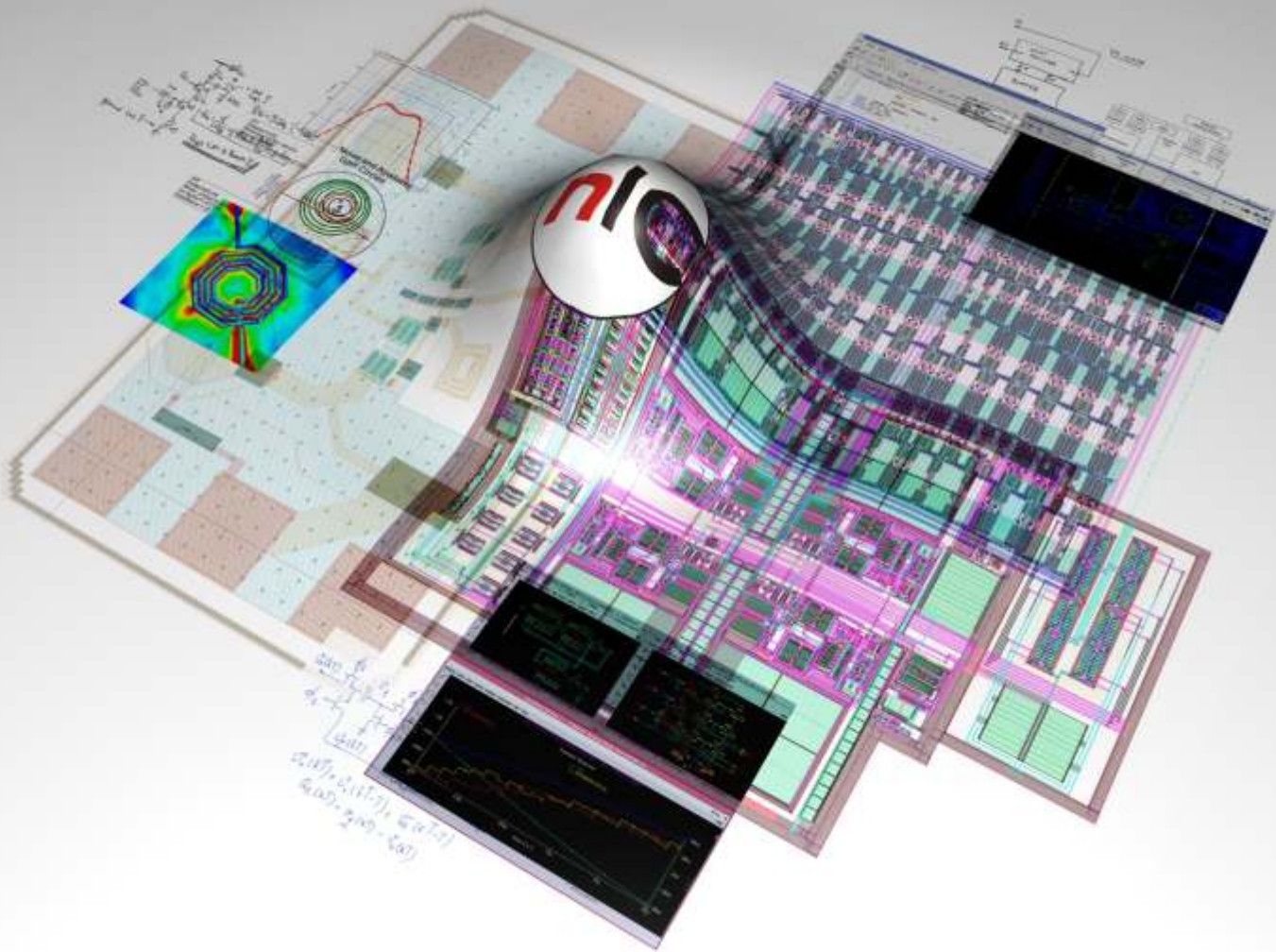


NOVELIC MICROSYSTEMS
IC DESIGN SERVICES



Welcome to NovellIC Microsystems, your one-stop IC design resource.

We provide Analog/Mixed-Signal/RF & Digital IC design with three-concept synergy:

- High Quality
- On-Time Delivery
- Low Cost

Company profile

NovelIC Microsystems is an IC design house offering cutting-edge design services and solutions in the fields of:

- Analog and Mixed-Signal ASIC design
- RF IC design
- Digital ASIC/FPGA design

Facing more than five years of working on diverse and demanding projects for customers in Europe and the USA, NovelIC Microsystems team has gained wide technical experience and grown into a strong and well-organized group.

Our mission

Excellent know-how combined with an efficient business model guarantees high quality, on-time delivery and low cost.

NovelIC Microsystems provides services and solutions for:

- Design Houses
- Semiconductor Companies
- Sensor Companies
- System Solution Providers

Business model

Dedicated engineering resources are hosted in our design center and managed by our team leader, providing customers with full project and resource control. NovelIC takes full care of engineers' day to day hosting facilities, proposes different levels of technical support, coordination or project management as required for activities such as risk and quality plan tracking, technical/progress reviews.

NovelIC Microsystems has the flexible business model that covers various cases in delivering services to our customers:

- **Outsourced design center:**
Development of application specific blocks and ASIC subsystems for a customer's system
- **Consultancy:**
Remote consultancy and short-term on-site support
- **Turnkey:**
Handling of complete system-on-chip design from feasibility study and architecture specification to the layout and prototype testing

Services

Analog/Mixed-Signal/RF:

SERVICES:

- Feasibility study
- Architecture and specification
- Chip level design methodologies (ESD, supplies, substrate noise, packaging, floor planning)
- Technology selection
- System-level modeling and verification
- Transistor level IC design
- Full custom IC layout
- Physical verification
- Test and product integration support
- Performance verification

EXPERIENCE:

ASIC blocks

- Operational Amplifiers
- Variable Gain Amplifiers
- Bandgap References
- Low Noise Amplifiers
- Power Amplifiers
- Current sources
- Phase Locked Loops
- Voltage Controlled Oscillators
- Mixers
- Filters
- High Speed Digital Interface
- Data Converters (ADC, DAC)
- ESD/Transient Protection

RF Platforms

- Ultra Wide Band UWB (advanced R&D)
- mm-Waves (60 GHz band)
- ISM bands (433 MHz, 836 MHz, 2.4/5 GHz)
- Bluetooth, W-LAN (IEEE 802.11 a/b/g)

Systems

- Transmitters and Receivers up to 60 GHz

Digital ASIC/FPGA

SERVICES:

- Feasibility study
- Specification and architecture definition
- Identifying IP requirements
- RTL coding in Verilog/VHDL and System Verilog
- SoC/Block integration
- Physical implementation (synthesis, timing analysis, test insertion, automated place and route)

EXPERIENCE:

- Image and video compression algorithms (JPEG, MJPEG, MPEG-4, H.264)
- Complete digital baseband for sensor & metering applications
- Various application-specific blocks

SoC design:

SERVICES:

- Requirements analysis, optimization and specification
- System architecture, SW/HW partitioning and optimization
- System design specification
- Sub-system specification and system test strategy
- System integration, debug and test

EXPERIENCE:

- Complete SoC solutions for position and speed metering systems
- Complete SoC solutions for water consumption metering systems

Tools

Design flow level	Tools
Analog ASIC design	Cadence Analog Design Flow Tools
Digital ASIC design	Verilog/VHDL, Cadence Digital Design Flow Tools, ModelSim
Chip verification	Assura, Diva
RF design	Agilent ADS, Momentum, HFSS, SpectreRF
FPGA design	Xilinx ISE, Xilinx EDK, Synopsys tools, System Generator
System Modeling	Matlab, Simulink, ADS Ptolemy, VerilogAMS, SpreadSheets
Programming	C/C++, Unix shell, SKILL, Ocean

Why NovellC Microsystems?

The team's excellence

The core of our team brings world-class engineers together. Their extensive technical background and team spirit gained through several years of cooperation accomplish our capability of managing projects and people.

Moreover, being located in the Innovations centre of the University of Belgrade, we have the advantage of recruiting the top students and researchers and thus continuing our quality.

The state-of-the art service

We are always in touch with cutting-edge technologies. Apart from pure industrial engagement, we are continuously cooperating with the Academic Community through various research projects. Some of our best engineers have gained respectful academic acknowledgment.

For these reasons, NovellC is the one-stop place for a customer who wants to reach beyond current limits in IC design.

The low-cost service

Outsourcing IC design to developing countries is a well-known business practice. The main goal is to reduce expenses. However, outsourcing also demands trust between partners. Our engineers have earned that trust through cooperation with top companies.

We are proud to provide our customers with world-class services at lower cost comparing to our competitors worldwide.

Contact

NovellC Microsystems
Gandijeva 31a/51
11000 Belgrade, Serbia

Tel: +381 65 4493206
e-mail: info@novelic.com
URL: www.novelic.com

Selected projects

Analog/Mixed-Signal/RF

Integrated power-meter
Design of the complete analog part

UWB Transmitter IC (IEEE 802.15.4a)
Design of the complete system

60 GHz Transceiver
Design of blocks for a multi-gigabit transceiver

Watch-Based Cospas/Sarsat Beacon
Blocks for an emergency beacon ASIC

2.4GHz Si-Ge Direct-I/Q Demodulator and Modulator
Redesign - bandwidth enhancement

Heat/Flow-meter ASIC
In-depth feasibility study

Digital ASIC/FPGA design

MPEG4 encoder
Encoder redesign. Error resilience implementation. FPGA verified.

MPEG4 Video over a DECT
Feasibility study and consultancy on an encoder/decoder design

SoC systems

Electromechanical sensor for position and speed acquisition
Complete design: system level, hardware implementation consultancy, signal processing algorithms, software development and implementation.



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