

DA-Design

A low risk proven path from product definition to volume production

Overview

With an experienced design team, a proven design methodology and best in class EDA technology, DA-Integrated offers end to end design services. From product definition through to volume production, our designers work closely with customers to achieve first-time correct designs while optimizing development cost, time to market, product performance, and product cost.

Services and expertise span the entire design-to-production process for ASIC, full custom and FPGA design flows. Flexible collaboration models range from a full turnkey designs to outsourcing a particular aspect of the design process.

DA-Integrated is committed to exceeding customer expectations and uses proven program management processes to keep projects on time and on budget.

Experience and Expertise

There is no substitute for experience when it comes to delivering first time correct silicon in an environment of increasing complexity and tight schedules. Averaging more than 15 years experience, our designers have completed IC development projects across a wide range of technologies including:

- Digital
- Analog
- Mixed signal
- RFIC

State-of-the-art methodologies are the key to success in IC development. Our area experts help you achieve your goals in a way that ensures success. In recent projects, we have partnered with customers in the following areas:

- Product Definition and Architecture
- Design, RTL Coding
- Verification (System Verilog, OVM, VMM)
- DFT Architecture, Insertion, Verification
- Physical Design, Timing closure, Chip Finishing

We use our expertise gained by working on diverse applications with numerous customers to solve your design challenges. In addition to our broad experience, recent projects have included the following areas of specialized technical expertise:

- Optical Networking
- Embedded Multi-Core SOCs
- Low Power design optimization
- Analog DFT

Examples of Recent Projects

130nm BiCMOS High Speed Transmitter:

DA-Integrated partnered with the customer's analog designers to accelerate time to market and reduce development costs. DA-Integrated provided the project management for the development and completed the verification and the physical implementation to GDSII. With a contribution of 5 engineers over a period of 9 months, DA-Integrated rounded out a team of 10 IC engineers to deliver first time correct silicon. The design was tested at the DA-Integrated test facility.

65nm BiCMOS Analog Chip: Working with DA-Integrated enabled the customer to focus on their strength - the critical high performance analog IP. DA-Integrated completed the remaining IC development tasks: design and verification of the digital IP control logic and the physical implementation of the design. The customer provided the high performance analog macro in and DA-Integrated delivered a complete GDSII chip out.

45nm Multi-Core Supercomputer: DA-Integrated developed a complete design for test strategy for a very high performance and complex multi-core super-computer device. Memory BIST and BISR, TDF coverage enhancement, IP core integration into the scan strategy as well as test coverage for SERDES PHY and DDR3 were a few examples of the challenging issues that were addressed. DA-Integrated augmented the customers design team with specialized design for test expertise.

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Flexible Collaboration

Partnering with DA-Integrated reduces development cost and time to market by giving you immediate access to development expertise at any step in design flow – enabling you to focus your core resources where they can provide the most value. DA-Integrated augments your development process with the resources and infrastructure required to complete an IC design and guide it through the development and manufacturing process.

Recognizing that every project and organization is different, DA-Integrated provides a customized mix of expertise, technology and services tailored to each customer's requirements:

- **Turnkey Design** – Complete turnkey design from specification to parts delivery
- **Assisted Design** – Working as an extension of your team, we take your core IP macros and complete the design to manufacturing process.
- **Custom Macro Provider** - Working as an extension of your team, our designers provide custom macros into your development process.
- **Design Flow Partner** – We fill resource or expertise gaps by outsourcing any aspect of a design including: digital and analog design, synthesis, verification, DFT insertion, layout, and timing.
- **Customized** – A customized mix of expertise, technology and services.

Flexible IP

We help customers manage the licensing, technical, quality, and cost issues involved with selecting and integrating IP from multiple sources. DA-Integrated's flexible model ensures the optimal IP is chosen for each design. Depending on the project, we reduce time to market by integrating any combination of customer IP, DA-Integrated's developed IP and specialty partner IP.

Best in Class EDA Technology

DA-Integrated's proven design methodology is supported by an investment in best in class EDA technology.

Cadence

- Virtuoso Analog Design Environment
- Virtuoso Spectre Circuit Simulator
- Incisive Enterprise Simulator
- SoC Encounter RTL-to-GDSII System

Mentor

- ModelSim ASIC and FPGA Design Simulator
- Fastscan
- TestKompress

Synopsis

- HSpice
- Leda RTL Checker
- VCS Functional Verification
- PrimeTime
- PrimeTime SI
- PrimeRail
- Tetramax Automatic Test Pattern Generation
- DFT Compiler
- Star RC-XT

Flexible Foundry Relationships

DA-Integrated has the capability to work with any foundry. Our model for flexible foundry relationships ensures the best foundry and process is chosen according to the unique requirements of each design.

From Design to Production

The design team at DA-Integrated is supported by a world class test engineering team, production test facility and IC supply chain management team. Access to the resources of DA-Test, DA-Operations and DA-Supply ensures that every IC project flows smoothly from design to volume production.