

Training Services



Since 1994, ARM has been the provider of choice for training in ARM-Powered design solutions. The training course material is written by the acknowledged world experts in ARM hardware and software and so is up-to-date and technically accurate.

ASIC Design Services is an Approved Training Centre for ARM, assuring you that the training material will be relevant and delivered by professional trainers. We offer the following training courses from ARM:

- ARM Architecture Fundamentals
- ARM Software Development using RealView
- ARM Cortex-M3 Software Development
- ARM11 family Software Development
- Cortex-M1 System Design



Doulos is the global leader for the development and delivery of market leading training solutions for SoC, FPGA and ASIC design and verification.

ASIC Design Services is a Certified Training provider for Doulos. We offer the following training courses from Doulos:

- Essential Digital Design techniques
- VHDL For FPGA Design
- Advanced VHDL

Mentor Graphics offers an unrivaled portfolio of leading-edge PCB design technologies in the world of High-Speed Design, Design for Manufacturing and Advanced Layout and Routing.

ASIC Design Services provides formal training courses using official Mentor Graphics training material for:

- PADS: PCB Layout flow for Desktop users
- Expedition: PCB Layout flow for Enterprises
- HyperLynx: Signal Integrity Analysis

Visit www.asic.co.za/training for training dates or email training@asic.co.za

Component Product Lines



- **Igloo:** lowest power FPGAs (2uW)
- **SmartFusion:** SoC integration
- **Nano:** smallest form factor FPGAs (as small as 3x3 mm)



- Magnetics for Networking and Telecoms



- 3D memory modules

Software Product Lines



- **CAM350:** PCB fabrication
- **BluePrint:** PCB Documentation



- **ModelSim:** HDL simulation
- **HDL Author:** Graphical HDL and design reuse
- **PADS:** PCB Layout for Desktop users
- **Expedition:** PCB Layout for Enterprises
- **HyperLynx:** Simulation solutions
- **SMS:** CAMCAD, PCB assembly
- **Vesys & CHS:** Cable harness



- JTAG test solutions

Physical Address:

1st Floor West Midview Building, Thandanani Office Park, Invicta Road, Midrand, South Africa

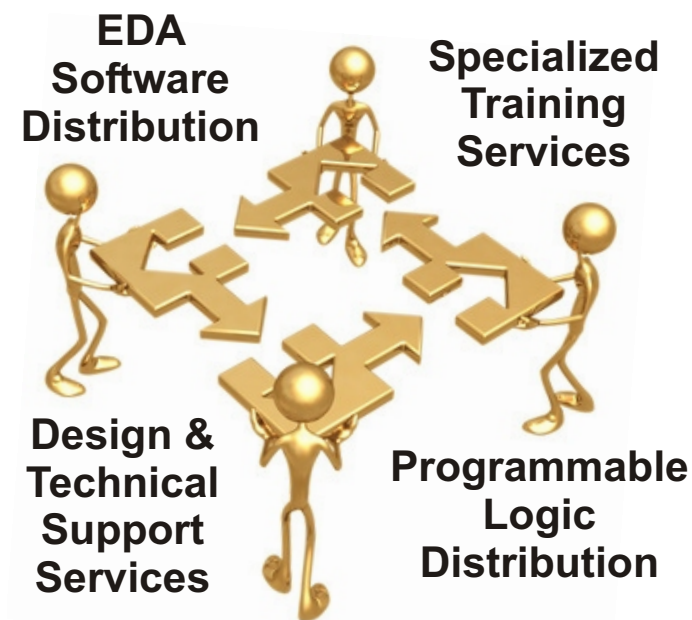
Postal Address

P.O. Box 5485, Midrand, 1685, South Africa

tel: +27 11 315 8316
email: info@asic.co.za

fax: +27 11 315 1711
website: www.asic.co.za

ASIC Design Services



*Powering your
Electronic Product
Development*

Introduction

From our origins in 1989 as a design house for Application Specific Integrated Circuits, ASIC Design Services today offers a broad range of services and distributes technically complex electronic components and EDA software solutions.

We have long recognized the need for providing professional training, technical support and design services to you, our customer. In so doing we add true value to your product development. Since our success is linked to yours, it is essential your products succeed in an ever increasingly competitive market. Our services provide the necessary catalyst for your success and the fulfillment of our product sales.

Key to our success is the strong synergy between our programmable logic and EDA software solutions, and the services we provide. This is only possible with our most valuable asset, our team of highly qualified engineers and professional administrators.

Design Services

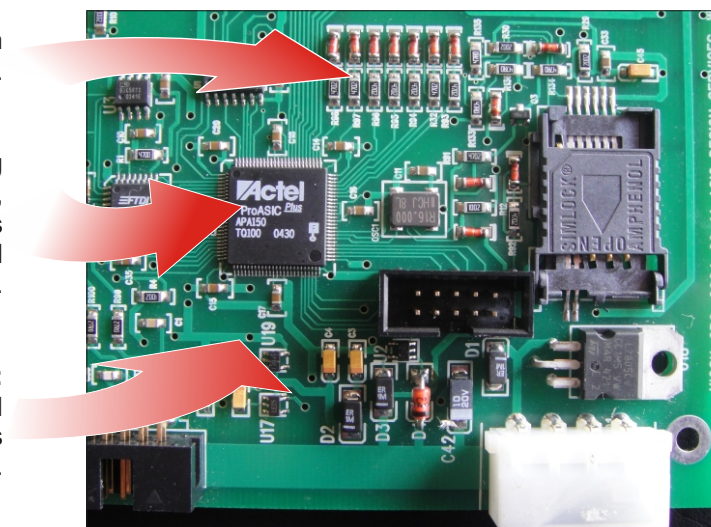
- **ASICs:** digital or mixed signal (in partnership with specialized design houses)
- **Programmable logic:** implemented on Actel FPGAs
- **PCB Layout:** using either PADS or Expedition design flows
- **Signal Integrity Analysis:** using the reknown HyperLynx technology

Specialized Design Expertise

- **Encryption:** our proprietary AES core is the smallest in the programmable logic industry, implemented on design secure Actel FPGAs.
- **Telecoms:** our proprietary E1 framer, implemented on an Actel FPGA & supplied with HALO Electronics magnetics.
- **Computers:** Actel PCI core based solutions as well as our proprietary PCI target device, PCILite.
- **Data Coms:** Actel 1553B and ARINC core based solutions.
- **DSP:** DSP algorithms implemented on Actel FPGAs, including a Digital Down Converter jointly developed with Kreon Technologies.

Product Development - AES encryption card for gaming industry

- **PCB Layout:** undertaken using PADS software.
- **FPGA Design:** incorporating our proprietary AES core, multiple UARTS, and interfaces to smart card, USB peripheral and digital I/Os.
- **Supply of Actel FPGAs:** ASIC Design Services supplied design secure Actel FPGAs and assembled PCBs.



ASIC Design Services developed both the FPGA and the PCB for a customer in the gaming industry. The FPGA is responsible for encrypting data between a PC, the user interface and a smart card. The AES encryption core engineered by ASIC Design Services is the smallest solution available in the programmable logic market.

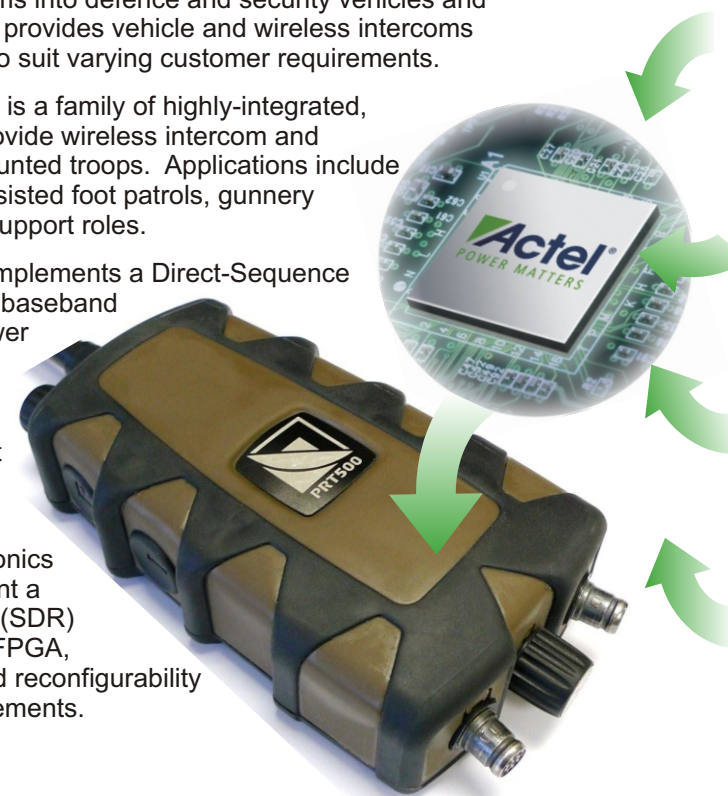
Customer Success Story - Natcom Electronics: Batcom radio

Natcom Electronics is a product developer and integrator of communication sub-systems into defence and security vehicles and containers. The company provides vehicle and wireless intercoms and internal data busses to suit varying customer requirements.

The BATCOM digital radio is a family of highly-integrated, short-range radios that provide wireless intercom and data distribution for dismounted troops. Applications include Peacekeeping, vehicle-assisted foot patrols, gunnery emplacements & logistic support roles.

A low power Actel FPGA implements a Direct-Sequence Spread Spectrum (DSSS) baseband radio receiver. A 90% power consumption saving was achieved compared to the traditional DSP processor approach, a critical benefit for Natcom in this battery powered application.

With Actel, Natcom Electronics has been able to implement a Software Definable Radio (SDR) almost entirely within the FPGA, offering great flexibility and reconfigurability for future customer requirements.



- **FPGA design:** For the XDM phase of development, Natcom defines the DSP algorithms using Matlab. ASIC Design Services implements the DSP algorithms in a low power Actel FPGA.

- **VHDL Training:** ASIC Design Services delivers comprehensive VHDL training to Natcom engineers.

- **Technical Support:** Natcom assumes responsibility for the FPGA design from the ADM phase of development. ASIC Design Services provides technical support to Natcom's FPGA designers.

- **Supply of Actel FPGAs:** ASIC Design Services supplies Natcom the Actel FPGAs used in the Batcom radio.