ANALOG DEVICES

MicroConverter™ Software Development Tools

Preliminary Technical Data — ADuC812-Tools

FEATURES

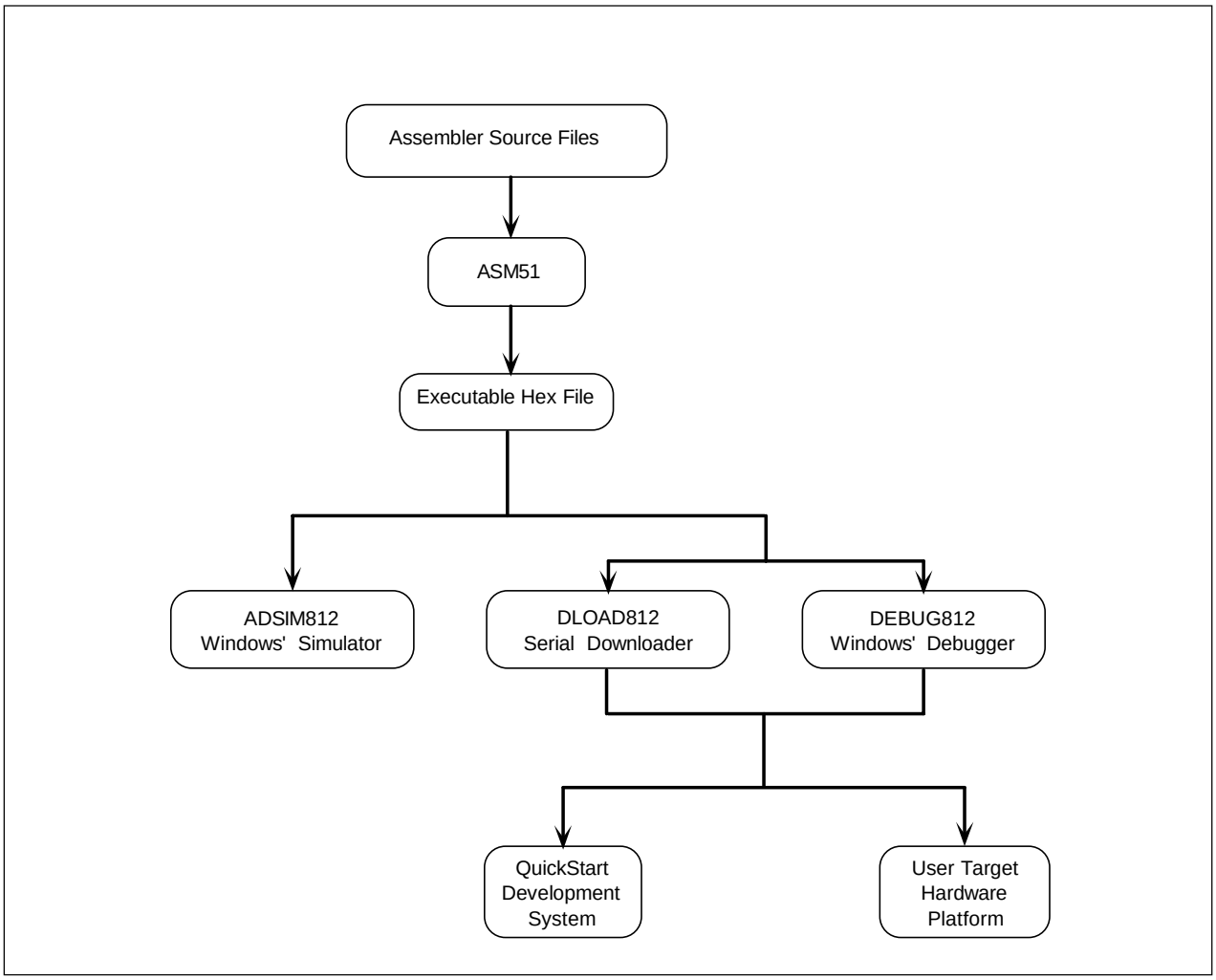
- **ASM51:** 8051 Cross Assembler
- **ADSIM812:** ADuC812 Windows Simulator
- **DEBUG812:** ADuC812 Debugger
- **DLOAD812:** ADuC812 Serial Downloader
- **QuickStart:** Hardware Development System

GENERAL DESCRIPTION

The ADuC812 set of development tools incorporate a complete suite of software and hardware design tools that allow you quickly and efficiently design, program, simulate , download and debug your MicroConverter application.

Figure 1. below, shows how the tools are used in a typical ADuC812 development environment.

FIGURE 1: TYPICAL ADUC812 DEVELOPMENT ENVIRONMENT



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The suite of Development Tools include the following components :

- ASM51 : 8051 Cross Assembler

Takes an assembly language source file created with a text editor and translates it into a machine language object file in Intel Hex standard format.

- ADSIM812 : ADuC812 Windows Simulator

The ADSIM812 is a Windows' application that fully simulates all ADuC812 functionality including ADC and DAC peripherals. The simulator provides an easy to use, intuitive interface to the ADuC812 functionality and integrates many standard debug features including multiple breakpoints, single stepping and code execution trace capability.

This tool can be used both as a tutorial guide to the silicon as well as an effecient way to prove code functionality before moving to a hardware platform.

Figure 2 below shows a typical screen shot from the ADSIM812 environment during a software debug session

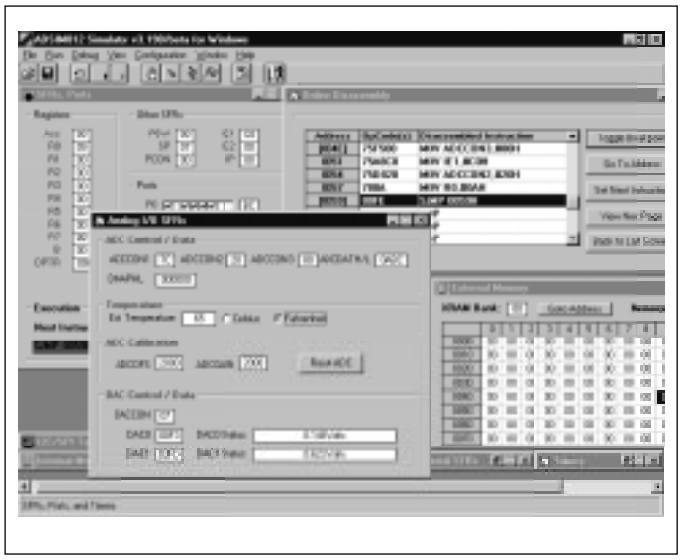

Figure 2. Typical Simulator Debug Session

- DLOAD812 : ADuC812 Serial Downloader

The DLOAD812 is a software program that allows you to easily download an assembled program to the on-chip program FLASH memory via the serial COM1 port on a standard PC.

- DEBUG812 : ADuC812 Serial Port Debugger

The DEBUG812 is a Windows' application that allows the user to debug code execution on silicon using the ADuC812 UART serial port. This debugger provides access to all on-chip peripherals during a typical debug session as well as basic break point capability. Figure 3 below shows a screen shot from the DEBUG812 environment during a typical hardware debug session.

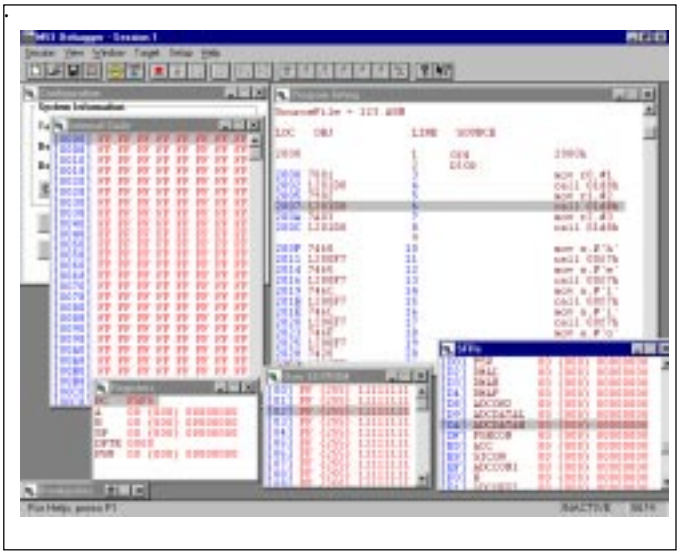

Figure 3. Typical Debug Session

- QuickStart Development System

The Quickstart Development System consists of the above components as well as a fully featured evaluation board on which a user can prove system functionality as well debugging application code before moving to a final target hardware platform. A typical configuration of the Quickstart Development System is shown below in Figure 4.

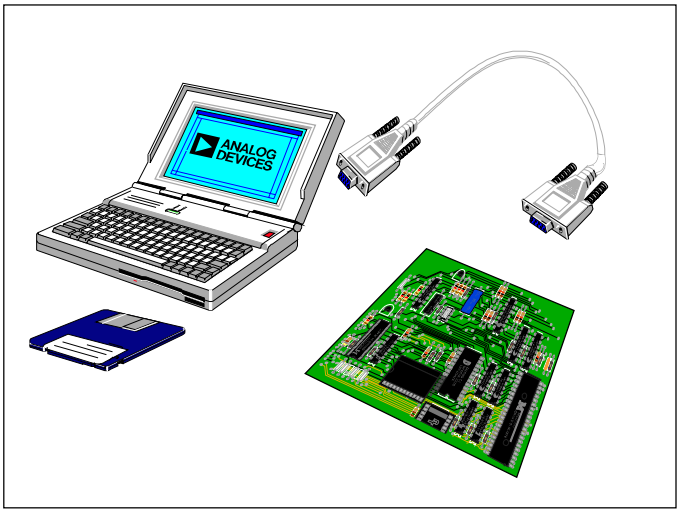

Figure 4. Typical QuickStart System