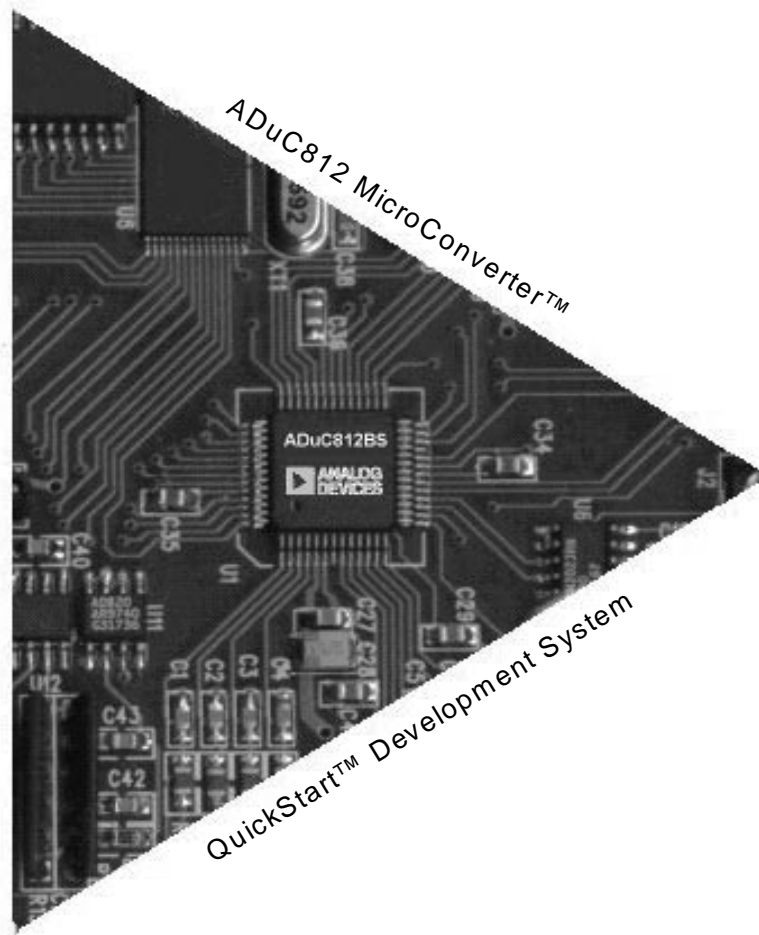




ADuC812 MicroConverter™  
QuickStart™ Development System V1.1  
Get Started Guide





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This CD-ROM includes software for use with the ADuC812 QuickStart Development System.

1. ASM51 - MetaLink Cross Assembler
2. ADSIM812 - ADuC812 Windows Simulator
3. DownLoad - MicroConverter Serial Downloader
4. DEBUG812 - ADuC812 Serial Port Debugger
5. Code - Example Code Directory
6. Documentation - Datasheets, Applications Notes, and other technical documentation

## **NOTES:**

### **1. Installation:**

Insert the CD-ROM "ADuC812 MicroConverter™, QuickStart™ Development System V1.1" into your CD-ROM drive. Double-click on Setup. Follow the instructions to install the software onto your PC.

- 2.** Please use attached example code BLINK.HEX to verify tools operation by following the step-by-step instructions below. BLINK.HEX simply flashes the P3.4 LED on and off at 100mSec intervals.

### **3. Running the MetaLink Assembler:**

- a.** In the "ADuC" folder, double-click the "ASM51" icon.
- b.** Type "code\blink.asm" in the DOS window which prompts you for the source file.

When finished, the DOS window will read: "ASSEMBLY COMPLETE, 0 ERRORS FOUND" indicating that the "blink.hex" file has been successfully generated.

### **4. Running the Serial Downloader on the evaluation Board:**

- a.** Power up your board
- b.** Connect serial cable from the 9-way D-type connector on the board to the COM1 port on your PC.
- c.** Verify the following link connections on the board.

LK3 - Inserted.

LK4 - Link Position A inserted (see attached Board User's Guide).

LK6 - Link Position A Inserted (see attached Board User's Guide)  
so as to run from internal code memory.

Pressing the reset button with this link configuration will initialise the part in serial download/debug mode.

- d.** Press the reset button on the board.

- e. To download code....
  - Open the "ADuC" directory
  - Double click the "DownLoad" icon in this directory
  - In the dialogue box, type the relative file name to download

eg: code\blink.hex

- remove LK3 and press reset

Pressing reset with LK3 removed resets the part into normal operation.  
The P3.4 LED will begin flashing as the program (blink.hex) starts execution.

- f. To download code and execute code simultaneously....
  - Repeat steps 3c and 3d
  - Again double click the "DownLoad" icon
  - In the dialogue box, type the relative file name to download followed by FF00

eg: code\blink.hex FF00

The P3.4 LED will begin flashing as the program (blink.hex) starts execution.

- g. The serial downloader can also be run from the DOS command line....
  - From the DOS prompt, open the ADuC\DownLoad directory
  - Type "download" followed by the filename

eg: download blink.hex  
or  
download blink.hex FF00

## 5. Running the DeBug812 Application

- a. Configure hardware as in 4.a thru 4.d above, please verify link configuration is as outlined in (4.c) above. Press the reset button to initialise the chip in serial download/debug mode.
- b. Double click on the "DeBug812" Icon in the directory "ADuC\DeBug812".
- c. From the pull-down menu select

SESSION -> OPEN

- d. Select DEMO.SES

(This opens a preconfigured demonstration session)

**(Note:** When you open DEMO.SES, you must help the debugger to find the HEX and LST files. To do this, in the “configuration” window, click on “Files...”. Then, in the “Session Files” window, click on “Browse...” buttons and choose “Blink.hex” and “Blink.lst”.)

- e. From the pull-down menu select

WINDOW -> PROGRAM LISTING

- f. Click the “RESET” button on the configuration window to start the debug session. Notice the windows updating as the PC software updates its screen directly from the ADuC812 on-chip peripherals including SFR space, code space etc... Green displays valid data while red display indicates the data in these locations has not been updated.
- g. Click the “PROG” button on the top toolbar to download the Blink.HEX program. Note the code space update.
- h. Click the run button just to the right of the “PROG” button to start code execution. The P3.4 LED will start flashing.
- i. Press the reset button on the board to re-initialize the debug session. Note the code memory automatically erases itself.
- j. Download the code again as in f. above.
- k. Scroll down the program listing to find label “BLINK:”.
- l. double click on this line to set a breakpoint. Select “Set Breakpoint” on the breakpoint dialogue box and notice the breakpoint location being registered in the breakpoint window.
- m. Now run code as in g. above and a dialogue box pops up to flag that you have hit a breakpoint. Click “OK” to acknowledge the breakpoint and notice the windows updating.  
  
(The dialogue box can be disabled by selecting SETUP -> DISPLAY from the pulldown menus at the top of the screen)
- n. Press resume key to continue program execution from the breakpoint. (note resume keys are 11th and 12th from left on the top toolbar)
- o. double click on the “BLINK:” label in listing window, to clear the breakpoint.

## Other notes on debugger :

- Double click any register location to read or modify that location.
- To customise what values are automatically uploaded, choose SETUP -> UPLOADS
- To view the function of any button in the toolbar, click on that button and hold while its function is displayed at the bottom of the screen.
- A complete help file will be available in the next revision of the QuickStart™ Development System.

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