

TCN#: 812-01

DATE: 6 Sept 1999

DEVICE/TOOL:

ADuC812 on-chip firmware, including download/debug kernel and power-on configuration routine.

DESCRIPTION OF CHANGE:

Update of on-chip firmware from the original Version 1, to Version 2.01.

REASON FOR CHANGE:

- Modify communications scheme for enhanced interface to Windows based tools.
- Add useful download & debug features. For example:
 - single-step debug feature
 - option to preserve data space during download
 - option to download to data space
 - command string to protect against accidental erasure
- Integrate ICE kernel for 3rd party emulator support (Accutron Inc.).
- Add a procedure to the power-on configuration routine that erases the on-chip RAM automatically on power-up or reset of the chip.

SUPPORTING INFORMATION:

MicroConverter technical note number uC-004 details the serial communication schemes used by both kernel revisions. Available on the web at the following URL:
http://www.analog.com/microconverter/technotes_code.html

DATE CHANGE EFFECTIVE:

This change is effective beginning with devices of manufacturing date code 9933. All devices of date code prior to 9933 contain Version 1 firmware.

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COMPATIBILITY:

With Development Tools.....

- The DOS based “DownLoad.exe” serial downloader (rev. 2.04 or later) is fully compatible with both versions of on-chip kernel.
- The Windows based “ADuC.exe” debugger (rev 2.xx) is compatible only with devices containing the Version 2.xx kernel.
- The Windows based “DeBug812.exe” debugger (rev 1.xx) is compatible only with devices containing the Version 1 kernel.
- Analog Devices, Inc. plans to continue support of both revisions of the debugger in order to support both kernel revisions.

With Production Systems.....

Kernel revision has NO IMPACT on user code execution/functionality or device performance. Code developed using the Version 1 kernel will work equally well in devices containing the Version 2 kernel, and vice-versa. Below are the only two exceptions to the above statements:

- Code that relies on the power-on configuration routine to erase the RAM automatically when the chip is reset or powered on is compatible only with chips containing the Version 2 firmware since the Version 1 power-on configuration routine does not erase the RAM.
- Systems making use of the Version 1 serial download protocol to reprogram devices via a non-PC host will require a host software update. Source code for the multi-protocol (Version 1 + Version 2 compatible) downloader can be obtained from the web at the following URL:

http://www.analog.com/microconverter/technotes_code.html